

REMEDIAL SITE ASSESSMENT DECISION - EPA REGION IV

Page 1 of 1

EPA ID: GA0001897768 Site Name: PROPERTY OF GEORGIA HOUSING & FINANCE

34855
State ID:

Alias Site Names:

City: NEWNAN

County or Parish: COWETA

State: GA

Refer to Report Dated: 09/30/97

Report Type: PRELIMINARY ASSESSMENT 001

Report Developed by:

DECISION:

- ☒ 1. Further Remedial Site Assessment under CERCLA (Superfund) is not required because:
- ☒ 1a. Site does not qualify for further remedial site assessment under CERCLA (No Further Remedial Action Planned - NFRAP)
- ☐ 1b. Site may qualify for action, but is deferred to:
- ☐ 2. Further Assessment Needed Under CERCLA:
- 2a. Priority: ☐ Higher ☐ Lower
- 2b. Other: (recommended action)

DISCUSSION/RATIONALE:

A previous home on this site location was treated with termiticides on several locations. Chlordane was detected at 230 ppb. This home was demolished in April 1996. A new home has been placed on top of the previous home location. The draft score is 19.

Site Decision Made by: ALAN W. YARBROUGH

Signature: 

Date: 08/28/98

PRELIMINARY ASSESSMENT

Property of Georgia Housing & Finance Authority
Newnan, Coweta County, Georgia

CERCLIS ID No.: GA0001897768

September 30, 1997

State of Georgia
Department of Natural Resources
Environmental Protection Division
Hazardous Waste Management Branch

Prepared By:

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TABLE OF CONTENTS

**Property of Georgia Housing & Finance Authority
20 Lake Shore Drive**

PRELIMINARY ASSESSMENT

<u>SECTION NUMBER</u>	<u>PAGE</u>
1.0 Introduction	1
2.0 Site History	1
3.0 Groundwater Pathway	2
4.0 Surface Water Pathway	3
5.0 Soil Exposure and Air Pathway	4
6.0 Summary and Conclusions	4
7.0 Important Aspects	5
References	
Appendix A - PA Score Sheets	
Appendix B - Photographs	
Appendix C - Topographic, National Inventory, and Flood Boundary Maps	
Appendix D - CENTRACTS DATA	
Appendix E - Hazardous Site Response File	
Appendix F - Telephone Conversations	
Appendix G - Geological, Hydrogeological, and Climate Data	
Appendix H - Endangered Species	

1.0 INTRODUCTION

Under authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), the Georgia Environmental Protection Division, Hazardous Waste Management Branch conducted a Preliminary Assessment (PA) at the Property of Georgia Housing & Finance Authority site in Newnan, Coweta, Georgia. The purpose of this investigation was to collect information concerning conditions at the Property of Georgia Housing & Finance Authority site sufficient to assess the threat posed to human health and the environment and to determine the need for additional CERCLA/SARA or other action. The scope of the investigation included review of available file information, a comprehensive target survey, an off-site reconnaissance, and an on-site survey.

2.0 SITE DESCRIPTION, OPERATION HISTORY, AND WASTE CHARACTERISTICS

2.1 Location

Property of Georgia Housing & Finance Authority (GHFA) site is located in Newnan, Coweta, Georgia.

The site is located 0.75 mile north of the city of Newnan, Georgia. The geographic coordinates are 33°24'21" N latitude and 84°49'03" W longitude (Fig. 1, Ref. 1). To reach the site, travel south on Interstate 85 from Atlanta to Newnan. Go west on Highway 34 to reach the city of Newnan. Exit on U.S. Route 29 or Highway 14. Go north for 1/2 mile, then northwest on Highway 70 or Roscoe Road for 1 mile. Exit on Lake Shore Drive at the Pinecrest Subdivision. Go west for 2000 feet just past Young Avenue. The site is second property on the left side of the road, 20 Lake Shore Drive.

The climate in Coweta County is mild. Means temperature range from 44°F in January to 78°F in July (Ref. 2). The mean annual precipitation is approximately 48 inches, with a net of 7 inches (Ref. 7).

2.2 Site Description

The 0.4-acre site is along the south side of Lake Shore Drive and is characterized by a 1,272 square-foot home with a gravel covered driveway. No fence secures the perimeter of the site. There is a down gradient slope along the western edge of the property. The area surrounding the site can best be described as residential with the nearest home being less than 100 feet from the site (Figs. 1 and 2).

2.3 Operational History and Waste Characteristics

The property has had several different owners. The property was owned by William Harvey Hill in 1967 who built a 1,300 square-foot home. This house was demolished and another home was built in 1974. Mr. Curtis and Mrs. Shirley Young at (b)(6) Personal purchased the property in July 1985. From March 1986 to 1988 the property was treated several times for termites using chlordane termiticide. An employee of the Ryder Pest Control Company made a pesticide application (chlordane) in a manner not suitable, and inconsistent with labeling restrictions, to a wooden deck at the rear of the house. The chlordane was tracked into the living areas of the house. Subsequent sampling of the interior of the house, including air samples from the living areas and basement and wipe samples of carpet and HVAC ducts indicated the presence of chlordane. Bulk samples of soil

from around the house foundation walls and from the area of the deck indicated the presence of chlordane. The deck was subsequently removed and replaced by the pest control operator in May 1988, and a portion of the soil beneath the deck was also removed. Confirmatory sampling of the soils during removal was not conducted. Subsequently, the Young's abandoned the property, and a foreclosure resulted. The Georgia Housing and Finance Authority (GHFA) acquired the property involuntarily (pursuant to its loan servicing agreement) subsequent to foreclosure. Testing of the site in 1991 provided information that a high level of termiticide remained in the foundation, soils and interior of the dwelling. In September 1995, Law Engineering and Environmental Services, Inc. (Law) collected six shallow soil samples at five locations in the area of the deck to further evaluate the actual soil concentrations. The analytical results indicated that the maximum concentration for chlordane and heptachlor were 230 $\mu\text{g/kg}$ and 7.1 $\mu\text{g/kg}$, respectively. On July 3, 1996 the Georgia Environmental Protection Division (EPD) notified Joseph Luttrell at (404) 679-0654 of GHFA that, based upon available information, it has determined that the release of chlordane and heptachlor to the soils beneath the deck does not meet the criteria for notification; trigger levels of 9.2 mg/kg for chlordane and 0.66 mg/kg for heptachlor. In March and April 1996, the house itself was demolished and removed to an appropriate landfill. See attachment Appendix E. Danny R. Buck purchased the property from GHFA on October 22, 1996 and then transferred the property to Richard Homes, Inc. on November 21, 1996. In February 1997, a new 1,272 square-foot home was brought in and placed upon area where the contaminated the former house was located. Currently, (b)(6) Personal Privacy and their child reside in this house.

3.0 GROUNDWATER PATHWAY

3.1 Hydrogeologic Setting

The GHFA site is located in the Southern Piedmont belt of the Piedmont physiographic province within the south Metropolitan Atlanta region (Refs. 9, p. 3; 10, pp. 2-3). In this area, regional tectonic stresses have warped the Paleozoic rock units into a complex series of folds that have been broken by faults and intruded by younger igneous plutons and dikes (Ref. 9, p. 4). The Southern Piedmont belt is a major grouping of metamorphic rocks that trend northeast-southwest across a large portion of northern Georgia and is separated from the Northern belt located approximately 5 miles southwest of the Brevard fault zone (Ref. 10, p. 23). Underlying the GHFA site are surficial deposits of interlayered amphibolite, gneiss, and schist (Refs. 10, pp. 42-43, 87, plate I; 10, pp. 8, 9). The soil underlying the site is gravelly sandy clay loam of the Madison-Urban series, exhibiting moderate permeability. It consists of a 5-inch layer of brown sandy clay loam, 38 inches of red subsoil of mixed clay loam and clay, extending at least 52 inches, as weathered mica schist (Ref. 7, pp. 22, Sheet Number 16). The Palmetto Granite is coarse-grained porphyritic granite that intruded into metamorphic rocks of the Atlanta Group approximately 300 to 325 million years ago (Ref. 10, pp. 23, 42, 87).

The aquifer of concern in the area is the unconfined residual soil/crystalline rock aquifer system (Ref. 8, plate I). Groundwater is contained within the pore spaces of the surficial deposits (collectively known as regolith) and in the joints, fractures, and other secondary openings in the bedrock. The regolith is composed of soil, saprolite (weathered rock), stream alluvium, colluvium, and other surficial deposits (Ref. 9, pp. 1, 8-9). Hydraulic conductivity values for the residual soil/crystalline rock aquifer system are estimated to range from 1×10^{-5} to 1×10^{-7} cm/sec (Ref. 13, p. 29). The groundwater is recharged by precipitation entering through bedrock openings in outcrop areas or by seeping through the regolith (Ref. 9, p. 9). The depth to the water table is highly dependent on

topography and changes in precipitation (Ref. 9, pp. 5, 9). Based on an analysis of a topographic map of the area surrounding the GHFA site, the depth to groundwater is estimated to range from 30 to 50 feet below land surface (Ref. 1). Wells drilled in this area ranged from 35 to 2,100 feet deep and typically yield at least 20 to 275 gallons per minute (Refs. 8, pp. 99-105; 9, p. 1). The direction of groundwater flow is generally toward the unnamed pond and then to Snake Creek, and then flows to the north towards Wahoo Creek. However, the extent of pore spaces in the regolith also affects groundwater flow (Refs. 1; 9, pp. 9, 11, 12).

3.2 Groundwater Targets

The nearest residences, in the Pinecrest subdivision, Sherwood Forest subdivision, and the City of Newnan receive their water from Newnan Water & Light. Approximately 75% of the population within the 4-mile radius obtains their drinking water from surface water intakes located on White Oak Creek, Sandy Creek and Line Creek and a series of reservoirs. The reservoirs (Newnan Waterworks Lakes) are 4 miles south of the site in question and are not along the surface water pathway (Ref. 15).

The private wells within the 4-mile radius from the site are screened at 212-390 feet deep for water (Ref. 8, pp. 99-105). One thousand four hundred and sixty eight (1,468) residents within 4 miles and eleven (11) residents within 0.25 mile of the site rely on drinking water wells (Ref. 15).

3.3 Groundwater Conclusions

There is no confirmed release of contaminants to the groundwater, but it may have occurred.

4.0 SURFACE WATER PATHWAY

4.1 Hydrogeologic Setting

The surface water pathways consist of ditch next to the site, western edge of the property. Due to the topography of the area, it is suspected that the groundwater flow from the site is flowing to the west (Fig. 2).

4.2 Surface Water Targets

There are no drinking water intakes within 15 downstream miles of the site. Most residents within the 4-mile radius from the site obtain their drinking water from one primary surface water intake located on White Oak Creek near Big Popular Road (7 miles east of the site) and two secondary intakes located Sandy Creek near Corinth Road (5 miles south of the site) and Line Creek near Highway 54 at the county line (11 miles east of the site). The Newnan Water and Light removes approximately 2 to 3 million gallons per day from White Oak Creek. The other intakes are only used during the winter months (Refs. 14 and 15). The small unnamed pond, Snake Creek and Wahoo Creek within 9 miles of the site are not known as fishery areas. The Chattahoochee River is used for fishing (channel catfish, striped bass, and crappies) (Ref. 15). The wetlands occurring in the area are associated with Snake Creek and Wahoo Creek (Ref. 3). This site lies outside of the 500-year floodplain (Ref. 2).

4.3 Surface Water Conclusions

No signs of stressed vegetation were noted. The bodies of water that are in the drainage pattern from the site are as follows: small unnamed pond, Snake Creek for 2 miles, Wahoo Creek for 7 miles, and then the Chattahoochee River. The Chattahoochee River is used for recreational fishing.

5.0 SOIL EXPOSURE AND AIR PATHWAYS

5.1 Physical Conditions

The site is in an residential area. The public has unrestricted access to the area.

5.2 Soil and Air Targets

The nearest residence is less than 100 feet and the nearest community is 1 mile away (Figs. 1 and 2, Ref. 1). Forty four (44) people, including 3 people onsite, live within a 0.25 mile of the site and 19,721 people live within 4 miles from the site (Ref. 4). The City of Newnan has a population of 12,497 (Ref. 16). Wetlands exist in the 4-mile radius as stated in Section 4.2 of this report.

Pursuant to the Georgia Endangered Wildlife Act of 1973 and the Federal Endangered Species Act of 1973, no wildlife is designated as a state and federally protected species (classified as endangered wildlife) whose range of habitat includes Coweta County (Ref. 5).

Pursuant to the Georgia Wildlife Preservation Act of 1973, Platanthera integrilabia (Correll) Luer (Monkeyface Orchid or White Fringeless Orchid) is designated as state protected species (classified threatened plants) whose range of habitat include Coweta, Carroll, Chattooga, Cobb, Forsyth, Rabun and Stephens Counties (Ref. 6). Additionally, Platanthera integrilabia (Correll) Luer is designated as a federally protected species (classified as a candidate plant) whose range of habitat includes Coweta County (Ref. 6).

The above protected flora and fauna were not designated as terrestrial sensitive environments for the soil or air pathways due to the fact that none of the protected species were observed on-site or off-site during the reconnaissance.

5.3 Soil Exposure and Air Pathway Conclusions

Access to the site is unrestricted, but the soil pathway does not appear to be a threat due to the removal of the wooden deck and soil beneath the deck. There has been no documented release to the atmosphere.

6.0 SUMMARY AND CONCLUSIONS

From March 1986 to 1988 the property on 20 Lake Shore Drive was treated several times for termites using chlordane termiticide. An employee of the Ryder Pest Control Company made a pesticide application (chlordane) in a manner not suitable, and inconsistent with labeling restrictions, to a wooden deck at the rear of the house. The chlordane was tracked into the living areas of the house. Subsequent sampling of the interior of the house, including air samples from the living areas and basement and wipe samples of carpet and HVAC ducts indicated the presence of chlordane. Bulk

samples of soil from around the house foundation walls and from the area of the deck indicated the presence of chlordane. The deck was subsequently removed and replaced in May 1988, and a portion of the soil beneath the deck was also removed. Testing of the site in 1991 provided information that a high level of termiticide remained in the foundation, soils and interior of the dwelling. In September 1995, Law Engineering and Environmental Services, Inc. (Law) collected six shallow soil samples at five locations in the area of the deck to further evaluate the actual soil concentrations. The analytical results indicated that the maximum concentration for chlordane and heptachlor were 230 $\mu\text{g/kg}$ and 7.1 $\mu\text{g/kg}$, respectively. Other studies have reported chlordane concentrations as high as 36 mg/kg at locations other than the deck area. However, the chlordane levels at these locations are consistent with residual values from a normal application, and appeared to be the result of a normal application of the pesticide. In March and April 1996, the house was demolished and removed to an appropriate landfill. In February 1997, a new 1,272 square-foot home was brought in and placed upon area where the former house was located. The Chattahoochee River is a fishery. There is no primary drinking water intake 15-mile downstream of the water flow. No confirmed release of hazardous material has occurred to the groundwater, surface water, and air pathways.

7.0 IMPORTANT ASPECTS OF THIS PRELIMINARY ASSESSMENT

7.1 Land Ownership

Danny R. Buck purchased the property from GHFA on October 22, 1996 and then transferred the property to Richard Homes, Inc. on November 21, 1996.

7.2 Water Flow Data

Mr. Dudley Buchanan of Newnan Water and Light informed me that the average water flow below and above the water discharge point on Wahoo Creek in the City of Newnan was 0.4 and 5.2 cfs respectively (Ref. 14). He also told me that the average water flow at the surface water intake on White Oak Creek is 16.8 cfs. On September 23, 1997 upon contacting the USGS Water Resources (Roger McFarlane) at (770) 903-9100 to obtain water flow data on Wahoo Creek and Chattahoochee River, I was informed that the average flow data is 26 cfs and 4,177 cfs respectively.

REFERENCES

1. U.S. Geological Survey, 7.5 minute topographic quadrangle maps of Georgia; Newnan North, 1965 (Photorevised (PR) 1982); Newnan South, 1965 (PR) 1973; (Photoinspected (PI) 1981); Newnan SW, 1965 (PR) 1982; Whitesburg, 1965 (PR) 1982.
2. U.S. Department of Housing and Urban Development, Flood Hazard Boundary Map of Coweta County, Georgia, 2 August 1982.
3. U.S. Department of the Interior, Fish and Wildlife Service, National Inventory Maps of Georgia, Newnan North 1994; Newnan South, 1994; Newnan SW 1994; and Whitesburg 1994; scale: 1:24,000.
4. Frost Associates, Contracts Report; Georgia Housing & Finance Authority: Newnan, Georgia, Essex, CT: 25 September 1997.
5. Odom, Ron R., Georgia's Protected Wildlife, Georgia Department of Natural Resources, Game and Fish Division, Endangered Wildlife Program, 15 September 1977.
6. Patrick, Thomas S., Protected Plants of Georgia, Georgia Department of Natural Resources, Wildlife Resources Division, Georgia Natural Heritage Program, 1995.
7. U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Coweta, Heard, and Troup Counties, Georgia, September 1980.
8. Cressler, C.W., Ground Water in the Greater Atlanta Region, Georgia, Georgia Department of Natural Resources, Environmental Protection Division, Information Circular 63, 1983.
9. Clark, John S., Ground-Water Resources of the South Metropolitan Atlanta Region, Georgia, Information Circular 88, 1991.
10. McConnell, Keith, Geology of the Greater Atlanta Region, Georgia Department of Natural Resources, Environmental Protection Division, Bulletin 96, 1984.
11. Davis, Kenneth, Significant Ground-Water Recharge Areas of Georgia, Hydrologic Atlas 18, 1989.
12. Trent, Victoria, Ground-Water Pollution Susceptibility Map of Georgia, Hydrologic Atlas 20, 1992.
13. Freeze, Allan R., Groundwater, Englewood Cliffs, N.J.: Prentice Hall, 1979.
14. Sibley, David, Superintendent of Newnan Water & Light, Phone Call. 22 September 1997.
15. Buchanan Dudley, Water Resource Manager of Newnan Water & Light, Phone Call. 22 September 1997.
16. Georgia County Government Magazine Yearbook 1997, Volume 48, Number 13, April 1997.
17. U.S. Department of Commerce, Proof copy table generated for Census 1990, CPH1: Summary Population and Housing Characteristics, Bureau of Census, April 1991.

Appendix A

APPENDIX A

OMB Approval Number: 2050-0095
Approved for Use Through: 1/92

PA Scoresheets

Site Name: <u>Property of Georgia Housing & Finance Authority</u>	Investigator: <u>James Sliwinski</u>
CERCLIS ID No.: <u>GA0001897768</u>	Agency/Organization: <u>DNR/GAEPD/HWMB</u>
Street Address: <u>20 Lake Shore Drive</u>	Street Address: <u>205 Butler St. S.E., 1154 East</u>
City/State/Zip: <u>Newnan, GA 30263</u>	City/State/Zip: <u>Atlanta, GA 30334</u>
	Date: <u>September 30, 1997</u>

GENERAL INFORMATION

Site Description and Operational History:

The 0.4-acre site is along the south side of Lake Shore Drive and is characterized by a 1,272 square-foot home with a gravel-covered driveway. No fence secures the perimeter of the site. There is a down gradient slope along the western edge of the property. The area surrounding the site can best be described as residential with the nearest home being less than 100 feet from the site.

The property had several different owners since 1967. From March 1986 to 1988 the property was treated several times for termites using chlordane termiticide. An employee of the Ryder Pest Control Company made a pesticide application (chlordane) in a manner not suitable, and inconsistent with labeling restrictions to a wooden deck at the rear of the house. The chlordane was tracked into the living areas of the house. Sampling of the interior of the house, including air samples from the living areas and basement and wipe samples of carpet and HVAC ducts indicated the presence of chlordane. Bulk samples of soil from around the house foundation walls and from the area of the deck indicated the presence of chlordane. The deck was subsequently removed and replaced by the pest control operator in May 1988, and a portion of the soil beneath the deck was also removed. Testing of the site in 1991 provided information that a high level of termiticide remained in the foundation, soils and interior of the dwelling. In September 1995, Law Engineering and Environmental Services, Inc. (Law) collected six shallow soil samples at five locations in the area of the deck to further evaluate the actual soil concentrations. All results were just below the Georgia Environmental Protection Division (EPD) Notification trigger levels of 9.2 mg/kg for chlordane and 0.66 mg/kg for heptachlor. On July 3, 1996 EPD notified GHFA that based upon available information it has determined that the release of chlordane and heptachlor to the soils beneath the deck does not meet the criteria for notification. In March and April 1996, the house itself was demolished and removed to an appropriate landfill. See attachment Appendix E. In February 1997, a new 1,272 square-foot home was brought in and placed upon area where the former house was located.

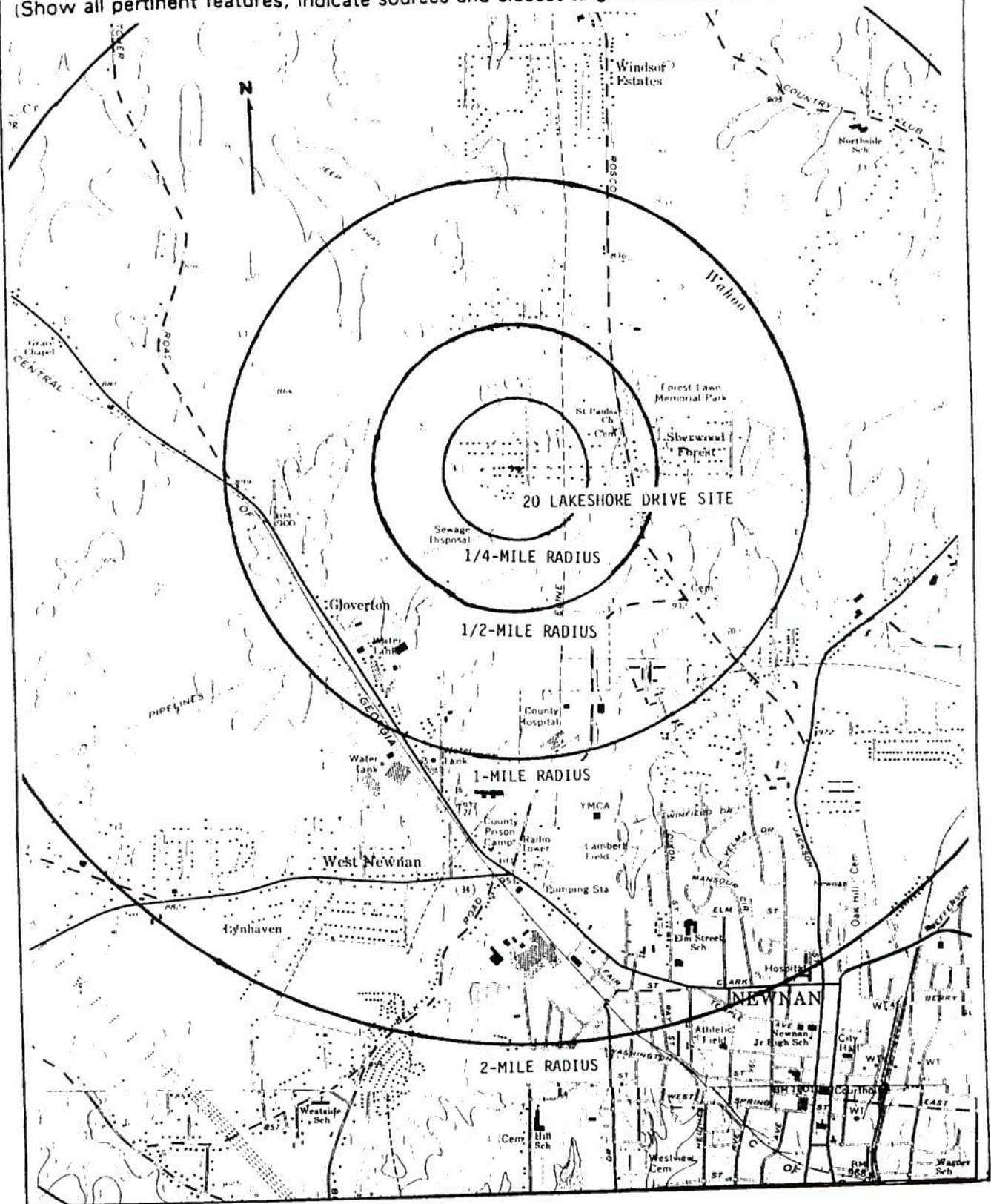
Probable Substances of Concern: (Previous investigations, analytical data)

An employee of the Ryder Pest Control Company made a pesticide application (chlordane) in a manner not suitable, and inconsistent with labeling restrictions to a wooden deck at the rear of the house. The chlordane was tracked into the living areas of the house. Subsequent sampling of the interior of the house, including air samples from the living areas and basement and wipe samples of carpet and HVAC ducts indicated the presence of chlordane. Bulk samples of soil from around the house foundation walls and from the area of the deck indicated the presence of chlordane. The deck was subsequently removed and replaced by the pest control operator in May 1988, and a portion of the soil beneath the deck was also removed. Confirmatory sampling of the soils during removal was not conducted. Testing of the site in 1991 provided information that a high level of termiticide remained in the foundation, soils and interior of the dwelling. In September 1995, Law Engineering and Environmental Services, Inc. (Law) collected six shallow soil samples at five locations in the area of the deck to further evaluate the actual soil concentrations. Analytical results indicated that the maximum concentration for chlordane and heptachlor were 230 $\mu\text{g/kg}$ and 7.1 $\mu\text{g/kg}$, respectively. See attachment Appendix E.

GENERAL INFORMATION (continued)

Site Sketch: Figure 1

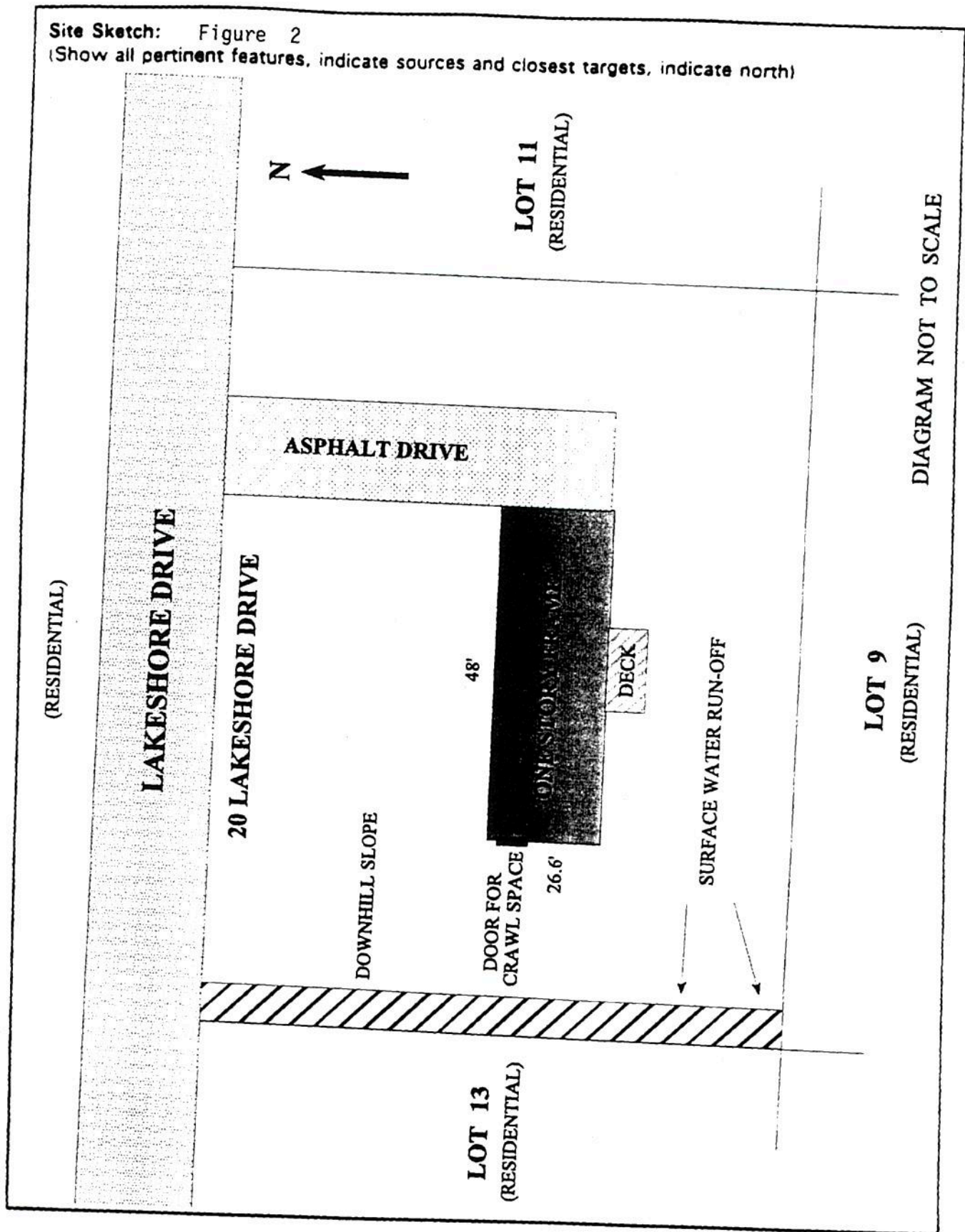
(Show all pertinent features, indicate sources and closest targets, indicate north)



GENERAL INFORMATION (continued)

Site Sketch: Figure 2

(Show all pertinent features, indicate sources and closest targets, indicate north)



SOURCE EVALUATION

Source No.: 1	Source Name: Contaminated Soil	Source Waste Quantity (WQ) Calculations: Estimated dimensions of the source: Tier: Area ≤ 78 acres WC = 18
Source Description: Estimated (1) 1,500 ft ² contaminated soil 0.03 acre		

Source No.:	Source Name:	Source Waste Quantity (WQ) Calculations:
Source Description:		

Source No.:	Source Name:	Source Waste Quantity (WQ) Calculations:
Source Description:		

Site WC:

18

PA TABLE 1: WASTE CHARACTERISTICS (WC) SCORES

PA Table 1a: WC Scores for Single Source Sites and Formulas for Multiple Source Sites

TIER	SOURCE TYPE	SINGLE SOURCE SITES (assigned WC scores)			MULTIPLE SOURCE SITES
		WC = 18	WC = 32	WC = 100	
UNRECOVERED	N/A	≤ 100 lb	> 100 to 10,000 lb	$> 10,000$ lb	$lb + 1$
WASTEWATER	N/A	$\leq 500,000$ lb	$> 500,000$ to 50 million lb	> 50 million lb	$lb + 5,000$
VOLUME	Landfill	≤ 6.75 million ft^3 $\leq 250,000$ yd^3	> 6.75 million to 675 million ft^3 $> 250,000$ to 25 million yd^3	> 675 million ft^3 > 25 million yd^3	$ft^3 + 67,500$ $yd^3 + 2,500$
	Surface impoundment	$\leq 6,750$ ft^3 ≤ 250 yd^3	$> 6,750$ to 675,000 ft^3 > 250 to 25,000 yd^3	$> 675,000$ ft^3 $> 25,000$ yd^3	$ft^3 + 67.5$ $yd^3 + 2.5$
	Drums	$\leq 1,000$ drums	$> 1,000$ to 100,000 drums	$> 100,000$ drums	$drums + 10$
	Tanks and non-drum containers	$\leq 50,000$ gallons	$> 50,000$ to 5 million gallons	> 5 million gallons	$gallons + 500$
	Contaminated soil	≤ 6.75 million ft^3 $\leq 250,000$ yd^3	> 6.75 million to 675 million ft^3 $> 250,000$ to 25 million yd^3	> 675 million ft^3 > 25 million yd^3	$ft^3 + 67,500$ $yd^3 + 2,500$
	Pile	$\leq 6,750$ ft^3 ≤ 250 yd^3	$> 6,750$ to 675,000 ft^3 > 250 to 25,000 yd^3	$> 675,000$ ft^3 $> 25,000$ yd^3	$ft^3 + 67.5$ $yd^3 + 2.5$
	Other	$\leq 6,750$ ft^3 ≤ 250 yd^3	$> 6,750$ to 675,000 ft^3 > 250 to 25,000 yd^3	$> 675,000$ ft^3 $> 25,000$ yd^3	$ft^3 + 67.5$ $yd^3 + 2.5$
AREA	Landfill	$\leq 340,000$ ft^2 ≤ 7.8 acres	$> 340,000$ to 34 million ft^2 > 7.8 to 780 acres	> 34 million ft^2 > 780 acres	$ft^2 + 3,400$ $acres + 0.078$
	Surface impoundment	$\leq 1,300$ ft^2 ≤ 0.029 acres	$> 1,300$ to 130,000 ft^2 > 0.029 to 2.9 acres	$> 130,000$ ft^2 > 2.9 acres	$ft^2 + 13$ $acres + 0.00029$
	Contaminated soil	≤ 3.4 million ft^2 ≤ 78 acres	> 3.4 million to 340 million ft^2 > 78 to 7,800 acres	> 340 million ft^2 $> 7,800$ acres	$ft^2 + 34,000$ $acres + 0.78$
	Pile*	$\leq 1,300$ ft^2 ≤ 0.029 acres	$> 1,300$ to 130,000 ft^2 > 0.029 to 2.9 acres	$> 130,000$ ft^2 > 2.9 acres	$ft^2 + 13$ $acres + 0.00029$
	Land treatment	$\leq 27,000$ ft^2 ≤ 0.62 acres	$> 27,000$ to 2.7 million ft^2 > 0.62 to 62 acres	> 2.7 million ft^2 > 62 acres	$ft^2 + 270$ $acres + 0.0062$

* Use area of land surface under pile, not surface area of pile.

1 ton = 2,000 lb = 1 yd^3 = 4 drums = 200 gallons

PA Table 1b: WC Scores for Multiple Source Sites

WQ Total	WC Score
> 0 to 100	18
> 100 to 10,000	32
$> 10,000$	100

GROUND WATER PATHWAY GROUND WATER USE DESCRIPTION

Describe Ground Water Use Within 4-miles of the Site:

(Describe stratigraphy, information on aquifers, municipal and/or private wells)

The GHFA site is located in the Southern Piedmont belt of the Piedmont physiographic province (Refs. 9, p. 3; 10, pp. 2-3). Underlying the GHFA site are surficial deposits of residual soil and weathered rock (amphibolite, gneiss, and schist) (Refs. 10, pp. 42-43, 87, plate I; 10, pp. 8, 9). The aquifer is an unconfined residual soil/crystalline rock aquifer system (Ref. 9, pp. 1, 8-9). Recharge to the groundwater is through precipitation (Ref. 9, p. 9). The depth to groundwater is estimated to range from 30 to 50 feet deep and typically yield at least 40 to 124 gallons per minute. The nearest well to the site is approximately 212 feet deep (Refs. 8, pp. 99-105; 9, p. 1).

Calculations for Drinking Water Populations Served by Ground Water:

The nearest residences, in the Pinecrest subdivision, Sherwood Forest subdivision, and the City of Newnan, receive their drinking water from Newnan Water & Light. Approximately 75% of the population within the 4-mile radius obtains their drinking water from surface water intakes located on White Oak Creek, Sandy Creek and Line Creek and a series of reservoirs (Ref. 15). The reservoirs, Newnan Waterworks Lakes, are 4 miles south of the site in question and are not along the surface water pathway (Ref. 1). The private wells within the 4-mile radius from the site are screened at 212-390 feet deep for water (Ref. 8, pp. 99-105). The information on drinking water populations served by groundwater is from the Contract Report with site longitude = 84.4903 and latitude = 33.2421 (Ref. 4).

GROUND WATER PATHWAY CRITERIA LIST	
SUSPECTED RELEASE	PRIMARY TARGETS
<div> <div>Y N U</div> <div>o o o</div> <div>s s s</div> <div>k k k</div> </div> <p><input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Are sources poorly contained?</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is the source a type likely to contribute to ground water contamination (e.g., wet lagoon)?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is waste quantity particularly large?</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is precipitation heavy?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is the infiltration rate high?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is the site located in an area of karst terrain?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is the subsurface highly permeable or conductive?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is drinking water drawn from a shallow aquifer?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Are suspected contaminants highly mobile in ground water?</p> <p><input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Does analytical or circumstantial evidence suggest ground water contamination?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Other criteria? _____</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> SUSPECTED RELEASE?</p>	<div> <div>Y N U</div> <div>o o o</div> <div>s s s</div> <div>k k k</div> </div> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is any drinking water well nearby?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Has any nearby drinking water well been closed?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Has any nearby drinking water user reported foul-tasting or foul-smelling water?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Does any nearby well have a large drawdown or high production rate?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is any drinking water well located between the site and other wells that are suspected to be exposed to a hazardous substance?</p> <p><input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Does analytical or circumstantial evidence suggest contamination at a drinking water well?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Does any drinking water well warrant sampling?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Other criteria? _____</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> PRIMARY TARGET(S) IDENTIFIED?</p>
<p>Summarize the rationale for Suspected Release (attach an additional page if necessary):</p>	<p>Summarize the rationale for Primary Targets (attach an additional page if necessary):</p>

GROUND WATER PATHWAY SCORESHEET

Pathway Characteristics	
Do you suspect a release (see Ground Water Pathway Criteria List, page 7)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Is the site located in karst terrain?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Depth to aquifer:	145'
Distance to the nearest drinking water well:	2640'

LIKELIHOOD OF RELEASE

	A Suspected Release	B No Suspected Release	Reference
1. SUSPECTED RELEASE: If you suspect a release to ground water (see page 7), assign a score of 550. Use only column A for this pathway.	550		
2. NO SUSPECTED RELEASE: If you do not suspect a release to ground water, and the site is in karst terrain or the depth to aquifer is 70 feet or less, assign a score of 500; otherwise, assign a score of 340. Use only column B for this pathway.		340	8,9,10,12
LR =		340	

TARGETS

3. PRIMARY TARGET POPULATION: Determine the number of people served by drinking water wells that you suspect have been exposed to a hazardous substance from the site (see Ground Water Pathway Criteria List, page 7). _____ people x 10 =			
4. SECONDARY TARGET POPULATION: Determine the number of people served by drinking water wells that you do NOT suspect have been exposed to a hazardous substance from the site, and assign the total population score from PA Table 2. Are any wells part of a blended system? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, attach a page to show apportionment calculations.		73	4,15
5. NEAREST WELL: If you have identified a primary target population for ground water, assign a score of 50; otherwise, assign the Nearest Well score from PA Table 2. If no drinking water wells exist within 4 miles, assign a score of zero.		20	
6. WELLHEAD PROTECTION AREA (WHPA): If any source lies within or above a WHPA, or if you have identified any primary target well within a WHPA, assign a score of 20; assign 5 if neither condition holds but a WHPA is present within 4 miles; otherwise assign zero.		0	8,15
7. RESOURCES		5	
T =		98	

WASTE CHARACTERISTICS

8. A. If you have identified any primary target for ground water, assign the waste characteristics score calculated on page 4, or a score of 32, whichever is GREATER; do not evaluate part B of this factor.		
B. If you have NOT identified any primary target for ground water, assign the waste characteristics score calculated on page 4.		18
WC =		18

GROUND WATER PATHWAY SCORE:

$$\frac{LR \times T \times WC}{82,500}$$

(subject to a maximum of 100)

7.3

PA TABLE 2: VALUES FOR SECONDARY GROUND WATER TARGET POPULATIONS

PA Table 2a: Non-Karst Aquifers

Distance from Site	Population	Nearest Well (choose Highest)	Population Served by Wells Within Distance Category										Population Value
			1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	Greater than 100,000	
0 to 1/4 mile	<u>11</u>	<u>20</u>	1	2	5	16	52	163	521	1,633	5,214	16,325	2
> 1/4 to 1/2 mile	<u>33</u>	18	1	1	3	10	32	101	323	1,012	3,233	10,121	3
> 1/2 to 1 mile	<u>207</u>	9	1	1	2	6	17	52	167	522	1,668	5,224	5
> 1 to 2 miles	<u>1136</u>	5	1	1	1	3	9	29	94	294	939	2,938	29
> 2 to 3 miles	<u>2147</u>	3	1	1	1	2	7	21	68	212	678	2,122	21
> 3 to 4 miles	<u>1394</u>	2	1	1	1	1	4	13	42	131	417	1,306	13
Nearest Well =		<u>20</u>	Score =										73

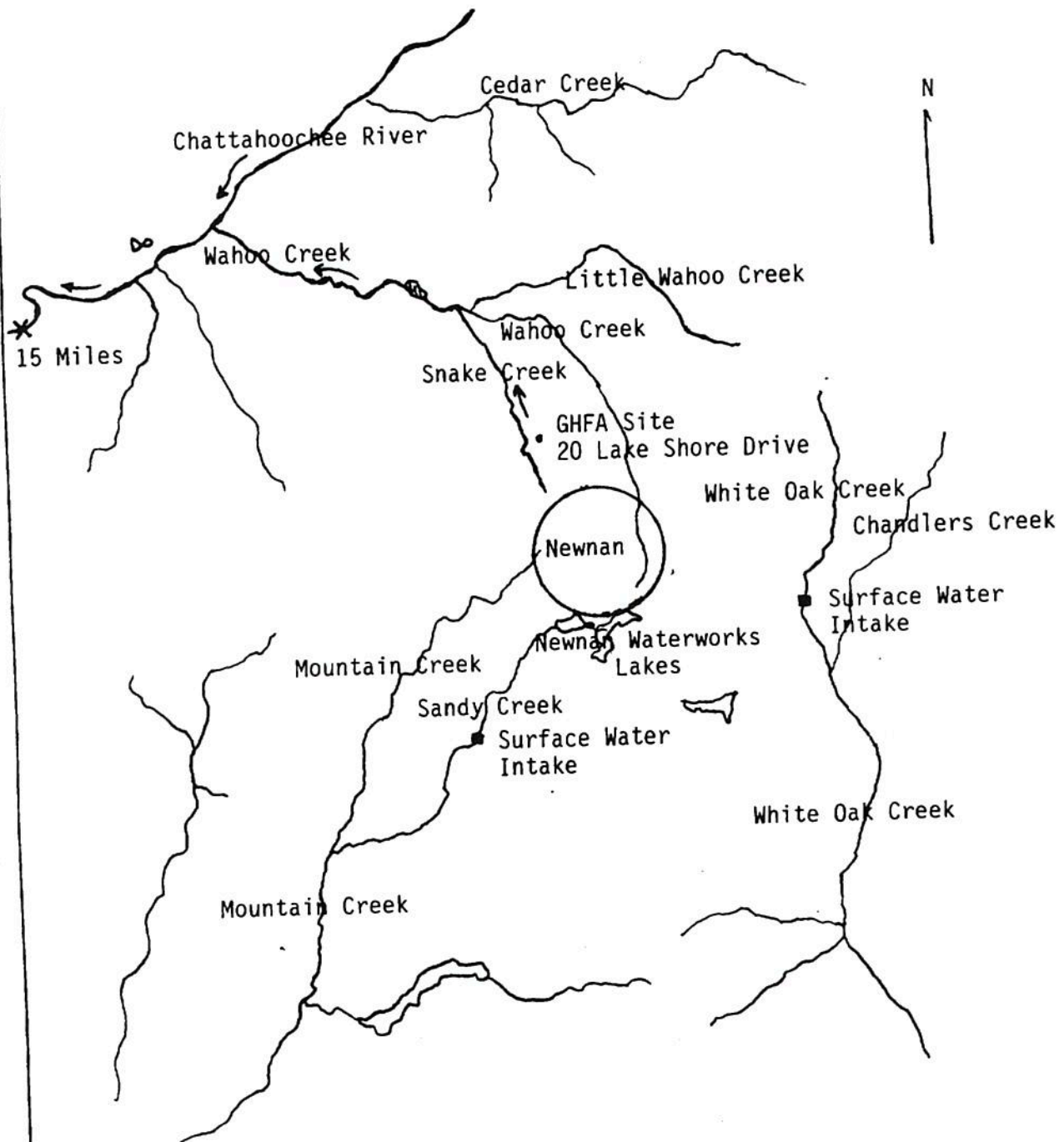
PA Table 2b: Karst Aquifers

Distance from Site	Population	Nearest Well (use 20 for karst)	Population Served by Wells Within Distance Category										Population Value
			1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	Greater than 100,000	
0 to 1/4 mile	—	20	1	2	5	16	52	163	521	1,633	5,214	16,325	—
> 1/4 to 1/2 mile	—	20	1	1	3	10	32	101	323	1,012	3,233	10,121	—
> 1/2 to 1 mile	—	20	1	1	3	8	26	82	261	816	2,607	8,162	—
> 1 to 2 miles	—	20	1	1	3	8	26	82	261	816	2,607	8,162	—
> 2 to 3 miles	—	20	1	1	3	8	26	82	261	816	2,607	8,162	—
> 3 to 4 miles	—	20	1	1	3	8	26	82	261	816	2,607	8,162	—
Nearest Well =		—	Score =										—

SURFACE WATER PATHWAY MIGRATION ROUTE SKETCH

Surface Water Migration Route Sketch:
(include runoff route, probable point of entry, 15-mile target distance limit, intakes, fisheries,
and sensitive environments)

* Not to Scale



SURFACE WATER PATHWAY CRITERIA LIST

SUSPECTED RELEASE	PRIMARY TARGETS
<p>Y N U e o n s k</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is surface water nearby?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is waste quantity particularly large?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is the drainage area large?</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is rainfall heavy?</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is the infiltration rate low?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Are sources poorly contained or prone to runoff or flooding?</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is a runoff route well defined (e.g., ditch or channel leading to surface water)?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is vegetation stressed along the probable runoff route?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Are sediments or water unnaturally discolored?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is wildlife unnaturally absent?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Has deposition of waste into surface water been observed?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is ground water discharge to surface water likely?</p> <p><input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Does analytical or circumstantial evidence suggest surface water contamination?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Other criteria? _____</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> SUSPECTED RELEASE?</p>	<p>Y N U e o n s k</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is any target nearby? If yes:</p> <p><input type="checkbox"/> Drinking water intake</p> <p><input type="checkbox"/> Fishery</p> <p><input checked="" type="checkbox"/> Sensitive environment</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Has any intake, fishery, or recreational area been closed?</p> <p><input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Does analytical or circumstantial evidence suggest surface water contamination at or downstream of a target?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Does any target warrant sampling? If yes:</p> <p><input type="checkbox"/> Drinking water intake</p> <p><input type="checkbox"/> Fishery</p> <p><input type="checkbox"/> Sensitive environment</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> Other criteria? _____</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> PRIMARY INTAKE(S) IDENTIFIED?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> PRIMARY FISHERY(IES) IDENTIFIED?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> PRIMARY SENSITIVE ENVIRONMENT(S) IDENTIFIED?</p>
<p>Summarize the rationale for Suspected Release (attach an additional page if necessary):</p>	<p>Summarize the rationale for Primary Targets (attach an additional page if necessary):</p>

SURFACE WATER PATHWAY LIKELIHOOD OF RELEASE AND DRINKING WATER THREAT SCORESHEET

Pathway Characteristics	
Do you suspect a release (see Surface Water Pathway Criteria List, page 11)?	Yes _____ No <u>X</u>
Distance to surface water:	<u>550</u>
Flood frequency:	<u>>500</u> cfs
What is the downstream distance to the nearest drinking water intake? <u>>15</u> miles	
Nearest fishery? <u>29</u> miles	Nearest sensitive environment? <u><1/4</u> miles

LIKELIHOOD OF RELEASE

- SUSPECTED RELEASE:** If you suspect a release to surface water (see page 11), assign a score of 550. Use only column A for this pathway.
- NO SUSPECTED RELEASE:** If you do not suspect a release to surface water, use the table below to assign a score based on distance to surface water and flood frequency. Use only column B for this pathway.

Distance to surface water \leq 2,500 feet	500
Distance to surface water $>$ 2,500 feet, and	
Site in annual or 10-year floodplain	500
Site in 100-year floodplain	400
Site in 500-year floodplain	300
Site outside 500-year floodplain	100

A	B
Suspected Release	No Suspected Release
550	
	100 + 500 = 500
	500
550	500

References

1, 2

LR =

DRINKING WATER THREAT TARGETS

- Record the water body type, flow (if applicable), and number of people served by each drinking water intake within the target distance limit. If there is no drinking water intake within the target distance limit, factors 4, 5, and 6 each receive zero scores.

Intake Name	Water Body Type	Flow	People Served
_____	_____	_____ cfs	_____
_____	_____	_____ cfs	_____
_____	_____	_____ cfs	_____

- PRIMARY TARGET POPULATION:** If you suspect any drinking water intake listed above has been exposed to a hazardous substance from the site (see Surface Water Pathway Criteria List, page 11), list the intake name(s) and calculate the factor score based on the total population served.

_____ people \times 10 =

- SECONDARY TARGET POPULATION:** Determine the number of people served by drinking water intakes that you do NOT suspect have been exposed to a hazardous substance from the site, and assign the total population score from PA Table 3.

Are any intakes part of a blended system? Yes _____ No X
If yes, attach a page to show apportionment calculations.

- NEAREST INTAKE:** If you have identified a primary target population for the drinking water threat (factor 4), assign a score of 50; otherwise, assign the Nearest Intake score from PA Table 3. If no drinking water intake exists within the target distance limit, assign a score of zero.

- RESOURCES**

	163
1-4	0
1-4	5
T =	168

1, 4, 15

SURFACE WATER PATHWAY (continued)
HUMAN FOOD CHAIN THREAT SCORESHEET

LIKELIHOOD OF RELEASE

Enter Surface Water Likelihood of Release score from page 12.

LR -

A	B
Supposed Release	No Supposed Release
100	500

References

HUMAN FOOD CHAIN THREAT TARGETS

8. Record the water body type and flow (if applicable) for each fishery within the target distance limit. If there is no fishery within the target distance limit, assign a Targets score of 0 at the bottom of the page.

Fishery Name	Water Body Type	Flow
Chattahoochee River	River	4,177 cfs
		cfs
		cfs
		cfs
		cfs

9. **PRIMARY FISHERIES:** If you suspect any fishery listed above has been exposed to a hazardous substance from the site (see Surface Water Criteria List, page 11), assign a score of 300 and do not evaluate Factor 10. List the primary fisheries:

- ## 10. SECONDARY FISHERIES

- A. If you suspect a release to surface water and have identified a secondary fishery but no primary fishery, assign a score of 210.

- B. If you do not suspect a release, assign a Secondary Fisheries score from the table below using the lowest flow at any fishery within the target distance limit.

Lowest Flow	Secondary Fisheries Score
< 10 cfs	210
10 to 100 cfs	30
> 100 cfs, coastal tidal waters, oceans, or Great Lakes	12

T =

[illegible]

15

12

12

PA TABLE 3: VALUES FOR SECONDARY SURFACE WATER TARGET POPULATIONS

Surface Water Body Flow (see PA Table 4)	Nearest Intake (choose Highest)	Population Served by Intakes Within Flow Category												Population Value
		1 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	Greater than 1,000,000		
		1	2	3	4	5	6	7	8	9	10			
< 10 cfs	20	2	5	10	52	103	521	1,033	5,214	10,325	52,138	103,240	163	
10 to 100 cfs	2	1	1	2	5	10	52	103	521	1,033	5,214	10,325		
> 100 to 1,000 cfs	1	0	0	1	1	2	5	10	52	103	521	1,033		
> 1,000 to 10,000 cfs	0	0	0	0	0	1	1	2	5	10	52	103		
> 10,000 cfs or Great Lakes	0	0	0	0	0	0	0	1	1	2	5	10		
3-mile Mixing Zone	10	1	3	8	26	82	261	816	2,607	8,162	26,068	81,663		
Nearest Intake =		2												Score =
														163

PA TABLE 4: SURFACE WATER TYPE / FLOW CHARACTERISTICS
WITH DILUTION WEIGHTS FOR SECONDARY SURFACE WATER SENSITIVE ENVIRONMENTS

Type of Surface Water Body		Dilution Weight
Water Body Type	Flow	
minimal stream	< 10 cfs	1
small to moderate stream	10 to 100 cfs	0.1
moderate to large stream	> 100 to 1,000 cfs	N/A
large stream to river	> 1,000 to 10,000 cfs	N/A
large river	> 10,000 cfs	N/A
3-mile mixing zone of quiet flowing streams or rivers	10 cfs or greater	N/A
coastal tidal water (harbors, sounds, bays, etc.), ocean, or Great Lakes	N/A	N/A

LIKELIHOOD OF RELEASE

LR -

A	B
Supposed Release	No Supposed Release
100	500

References

11. Record the water body type and flow (if applicable) for each surface water sensitive environment within the target distance limit (see PA Tables 4 and 5). If there is no sensitive environment within the target distance limit, assign a Targets score of 0 at the bottom of the page.

Environment Name	Water Body Type	Flow
Snake Creek	Creek	626 cfs
Wahop Creek	Creek	26 cfs
Chattahoochee River	River	4,177 cfs
		cfs
		cfs

12. PRIMARY SENSITIVE ENVIRONMENTS: If you suspect any sensitive environment listed above has been exposed to a hazardous substance from the site (see Surface Water Criteria List, page 11), assign a score of 300 and do not evaluate factor 13. List the primary sensitive environments:

13. **SECONDARY SENSITIVE ENVIRONMENTS:** If sensitive environments are present, but none is a primary sensitive environment, evaluate Secondary Sensitive Environments based on flow.

- A. For secondary sensitive environments on surface water bodies with flows of 100 cfs or less, assign scores as follows, and do not evaluate part B of this factor:

Flow	Diffusion Weight (PA Table 4)	Environment Type and Value (PA Tables 5 and 6)	Total
26 cfs	0.1	Wetland 150	150
cfs			
cfs			
cfs			
cfs			
cfs			

Sum -

- B. If all secondary sensitive environments are located on surface water bodies with flows > 100 cfs, assign a score of 10.

T =

PA TABLE 5: SURFACE WATER AND AIR PATHWAY SENSITIVE ENVIRONMENTS VALUES

<i>Sensitive Environment</i>	<i>Assigned Value</i>
Critical habitat for Federally designated endangered or threatened species	100
Marine Sanctuary	
National Park	
Designated Federal Wilderness Area	
Ecologically important areas identified under the Coastal Zone Wilderness Act	
Sensitive Areas identified under the National Estuary Program or Near Coastal Water Program of the Clean Water Act	
Critical Areas identified under the Clean Lakes Program of the Clean Water Act (subareas in lakes or entire small lakes)	
National Monument (air pathway only)	
National Seashore Recreation Area	
National Lakeshore Recreation Area	
Habitat known to be used by Federally designated or proposed endangered or threatened species	75
National Preserve	
National or State Wildlife Refuge	
Unit of Coastal Barrier Resources System	
Federal land designated for the protection of natural ecosystems	
Administratively Proposed Federal Wilderness Area	
Spawning areas critical for the maintenance of fish/shellfish species within a river system, bay, or estuary	
Migratory pathways and feeding areas critical for the maintenance of anadromous fish species in a river system	
Terrestrial areas utilized for breeding by large or dense aggregations of vertebrate animals (air pathway) or semi-aquatic foragers (surface water pathway)	
National river reach designated as Recreational	
Habitat known to be used by State designated endangered or threatened species	50
Habitat known to be used by a species under review as to its Federal endangered or threatened status	
Coastal Barrier (partially developed)	
Federally designated Scenic or Wild River	
State land designated for wildlife or game management	25
State designated Scenic or Wild River	
State designated Natural Area	
Particular areas, relatively small in size, important to maintenance of unique biotic communities	
State designated areas for protection/maintenance of aquatic life under the Clean Water Act	5
Wetlands	

See PA Table 6 (Surface Water Pathway)
or
PA Table 9 (Air Pathway)

PA TABLE 6: SURFACE WATER PATHWAY
WETLANDS FRONTAGE VALUES

<i>Total Length of Wetlands</i>	<i>Assigned Value</i>
Less than 0.1 mile	0
0.1 to 1 mile	25
Greater than 1 to 2 miles	50
Greater than 2 to 3 miles	75
Greater than 3 to 4 miles	100
Greater than 4 to 8 miles	150
Greater than 8 to 12 miles	250
Greater than 12 to 18 miles	350
Greater than 18 to 20 miles	450
Greater than 20 miles	500

**SURFACE WATER PATHWAY (concluded)
WASTE CHARACTERISTICS, THREAT, AND PATHWAY SCORE SUMMARY**

WASTE CHARACTERISTICS	A	B
	<i>Suspected Release</i>	<i>No Suspected Release</i>
14. A. If you have identified any primary target for surface water (pages 12, 14, or 15), assign the waste characteristics score calculated on page 4, or a score of 32, whichever is GREATER; do not evaluate part B of this factor.	(100 or 32)	
B. If you have NOT identified any primary target for surface water, assign the waste characteristics score calculated on page 4.	(100 or 32, or 100)	(100 or 32, or 100)
		18
WC =		18

SURFACE WATER PATHWAY THREAT SCORES

Threat	<i>Likelihood of Release (LR) Score (from page 12)</i>	<i>Targets (T) Score (pages 12, 14, 15)</i>	<i>Pathway Waste Characteristics (WC) Score (determined above)</i>	<i>Threat Score LR x T x WC / 82,500</i>
Drinking Water	500	168	18	<div> Limited to a maximum of 100 18.3 </div>
Human Food Chain	500	12	18	<div> Limited to a maximum of 100 1.3 </div>
Environmental	500	15.0	18	<div> Limited to a maximum of 100 1.6 </div>

SURFACE WATER PATHWAY SCORE
(Drinking Water Threat + Human Food Chain Threat + Environmental Threat)

<div> Limited to a maximum of 100 21.2 </div>
--

SOIL EXPOSURE PATHWAY CRITERIA LIST	
SUSPECTED CONTAMINATION	RESIDENT POPULATION
<p>Surficial contamination can generally be assumed.</p>	<p>Y N U e o n s k <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is any residence, school, or daycare facility on or within 200 feet of an area of suspected contamination?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is any residence, school, or daycare facility located on adjacent land previously owned or leased by the site owner/operator?</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is there a migration route that might spread hazardous substances near residences, schools, or daycare facilities?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Have onsite or adjacent residents or students reported adverse health effects, exclusive of apparent drinking water or air contamination problems?</p> <p><input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Does any neighboring property warrant sampling?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> Other criteria? _____</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/> RESIDENT POPULATION IDENTIFIED?</p>
	<p>Summarize the rationale for Resident Population (attach an additional page if necessary):</p> <p>There are six (6) residences within 200 feet of suspected contamination. The population for Coweta County is 2.82 persons per household (Ref.17). There are three people living on the property. The Resident Population is nineteen (19).</p>

SOIL EXPOSURE PATHWAY SCORESHEET

Pathway Characteristics	
Do any people live on or within 200 ft of areas of suspected contamination?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Do any people attend school or daycare on or within 200 ft of areas of suspected contamination?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Is the facility active? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, estimate the number of workers: _____	

LIKELIHOOD OF EXPOSURE

1. SUSPECTED CONTAMINATION: Surficial contamination can generally be assumed, and a score of 550 assigned. Assign zero only if the absence of surficial contamination can be confidently demonstrated.

LE = 550

Suspected
Contamination
550

References

RESIDENT POPULATION THREAT TARGETS

2. RESIDENT POPULATION: Determine the number of people occupying residences or attending school or daycare on or within 200 feet of areas of suspected contamination (see Soil Exposure Pathway Criteria List, page 18).

19 people x 10 = 190

3. RESIDENT INDIVIDUAL: If you have identified a resident population (factor 2), assign a score of 50; otherwise, assign a score of 0.

50

4. WORKERS: Use the following table to assign a score based on the total number of workers at the facility and nearby facilities with suspected contamination:

Number of Workers	Score
0	0
1 to 100	5
101 to 1,000	10
> 1,000	15

0

5. TERRESTRIAL SENSITIVE ENVIRONMENTS: Use PA Table 7 to assign a value for each terrestrial sensitive environment on an area of suspected contamination:

Terrestrial Sensitive Environment Type	Value

Sum =

0

6. RESOURCES

5

T = 245

WASTE CHARACTERISTICS

7. Assign the waste characteristics score calculated on page 4.

WC = 18

RESIDENT POPULATION THREAT SCORE:

LE X T X WC
82,500

29.4

NEARBY POPULATION THREAT SCORE:

1

SOIL EXPOSURE PATHWAY SCORE:

Resident Population Threat + Nearby Population Threat

30.4

AIR PATHWAY CRITERIA LIST

SUSPECTED RELEASE		PRIMARY TARGETS
Y N U e o n s k		
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Are odors currently reported?	If you suspect a release to air, evaluate all populations and sensitive environments within 1/4 mile (including those onsite) as primary targets.
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Has release of a hazardous substance to the air been directly observed?	
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Are there reports of adverse health effects (e.g., headaches, nausea, dizziness) potentially resulting from migration of hazardous substances through the air?	
<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Does analytical or circumstantial evidence suggest a release to the air?	
<input type="checkbox"/> <input checked="" type="checkbox"/>	Other criteria? _____	
<input type="checkbox"/> <input checked="" type="checkbox"/>	SUSPECTED RELEASE?	

Summarize the rationale for Suspected Release (attach an additional page if necessary):

AIR PATHWAY SCORESHEET

Pathway Characteristics	
Do you suspect a release (see Air Pathway Criteria List, page 21)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Distance to the nearest individual:	onsite

LIKELIHOOD OF RELEASE

- SUSPECTED RELEASE:** If you suspect a release to air (see page 21), assign a score of 550. Use only column A for this pathway.
- NO SUSPECTED RELEASE:** If you do not suspect a release to air, assign a score of 500. Use only column B for this pathway.

A	B
Suspected Release	No Suspected Release
550	500
LR =	500

Reference

TARGETS

- PRIMARY TARGET POPULATION:** Determine the number of people subject to exposure from a suspected release of hazardous substances to the air.
_____ people x 10 =
- SECONDARY TARGET POPULATION:** Determine the number of people not suspected to be exposed to a release to air, and assign the total population score using PA Table 8.
- NEAREST INDIVIDUAL:** If you have identified any Primary Target Population for the air pathway, assign a score of 50; otherwise, assign the Nearest Individual score from PA Table 8.
- PRIMARY SENSITIVE ENVIRONMENTS:** Sum the sensitive environment values (PA Table 5) and wetland acreage values (PA Table 9) for environments subject to exposure from a suspected release to the air.

Sensitive Environment Type	Value

Sum =

- SECONDARY SENSITIVE ENVIRONMENTS:** Use PA Table 10 to determine the score for secondary sensitive environments.

- RESOURCES**

T =

	9
	20
	1
	5
T =	35

4

3

WASTE CHARACTERISTICS

- A.** If you have identified any Primary Target for the air pathway, assign the waste characteristics score calculated on page 4, or a score of 32, whichever is GREATER; do not evaluate part B of this factor.
- B.** If you have NOT identified any Primary Target for the air pathway, assign the waste characteristics score calculated on page 4.

WC =

	18
WC =	18

AIR PATHWAY SCORE:

$$\frac{LR \times T \times WC}{82,500}$$

3.8

PA TABLE 8: VALUES FOR SECONDARY AIR TARGET POPULATIONS

Distance from Site	Nearest Individual (choose closest)	Population Within Distance Category												Population Value	Score -
		1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	Greater than 1,000,000		
Onsite	20	1	2	5	10	52	103	521	1,033	5,214	10,325	52,126	103,240	1	
> 0 to 1/4 mile	20	1	1	1	4	13	41	120	408	1,303	4,081	13,034	40,811	1	
> 1/4 to 1/2 mile	2	0	0	1	1	3	9	28	88	282	882	2,815	8,815	1	
> 1/2 to 1 mile	1	0	0	0	1	1	3	8	26	83	261	834	2,612	1	
> 1 to 2 miles	0	0	0	0	0	1	1	3	8	27	83	266	833	3	
> 2 to 3 miles	0	0	0	0	0	1	1	1	4	12	38	120	378	1	
> 3 to 4 miles	0	0	0	0	0	0	1	1	2	7	23	73	228	1	
Nearest Individual = 20														9	

PA TABLE 9: AIR PATHWAY VALUES FOR WETLAND AREA

Wetland Area	Assigned Value
Less than 1 acre	0
1 to 50 acres	25
Greater than 50 to 100 acres	75
Greater than 100 to 150 acres	125
Greater than 150 to 200 acres	175
Greater than 200 to 300 acres	250
Greater than 300 to 400 acres	350
Greater than 400 to 500 acres	450
Greater than 500 acres	500

PA TABLE 10: DISTANCE WEIGHTS AND CALCULATIONS FOR AIR PATHWAY SECONDARY SENSITIVE ENVIRONMENTS

Distance	Distance Weight	Sensitive Environment Type and Value (from PA Table 6 or 9)		Product
		Distance	Weight	
Onsite	0.10	x	x	
		x	x	
0-1/4 mi	0.025	x Wetlands (1 ± 50 acres)	25	0.62
		x	x	
1/4-1/2 mi	0.0054	x Wetlands (1 ± 50 acres)	25	0.14
		x	x	
		x	x	
Total Environments Score =				0.76

SITE SCORE CALCULATION

	S	S ²
GROUND WATER PATHWAY SCORE (S _{gw}):	7.3	53.3
SURFACE WATER PATHWAY SCORE (S _{sw}):	21.2	449.4
SOIL EXPOSURE PATHWAY SCORE (S _s):	30.4	924.1
AIR PATHWAY SCORE (S _a):	3.8	14.4
SITE SCORE:	$\sqrt{\frac{S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2}{4}}$	
		19.0

SUMMARY

	YES	NO
<p>1. Is there a high possibility of a threat to any nearby drinking water well(s) by migration of a hazardous substance in ground water?</p> <p>A. If yes, identify the well(s). _____</p> <p>B. If yes, how many people are served by the threatened well(s)? _____</p>	=	X
<p>2. Is there a high possibility of a threat to any of the following by hazardous substance migration in surface water?</p> <p>A. Drinking water intake</p> <p>B. Fishery</p> <p>C. Sensitive environment (wetland, critical habitat, others)</p> <p>D. If yes, identify the target(s). _____</p>	<p> </p>	<p>X</p> <p>X</p> <p>X</p>
<p>3. Is there a high possibility of an area of surficial contamination within 200 feet of any residence, school, or daycare facility?</p> <p>If yes, identify the property(ies) and estimate the associated population(s). _____</p>	<p> </p>	<p>X</p>
<p>4. Are there public health concerns at this site that are not addressed by PA scoring considerations? If yes, explain: _____</p>	<p>□</p>	<p>X</p>

Potential Hazardous Waste Site Preliminary Assessment Form				Identification	
			State: GA	CERCLIS Number: GA000187768	
			CERCLIS Discovery Date:		
1. General Site Information					
Name: Property of Georgia Housing & Finance Authority			Street Address: 20 Lake Shore Drive		
City: Newnan			State: GA	Zip Code: 30263	County: Coweta
Latitude: 33° 24' 21. - "			Longitude: 84° 49' 03. - "		Approximate Area of Site: 0.4 Acres
			Status of Site: <input checked="" type="checkbox"/> Active <input type="checkbox"/> Inactive		<input type="checkbox"/> Not Specified <input type="checkbox"/> NA (GW plume, etc.)
2. Owner/Operator Information					
Owner: Danny R. Buck (Richard Homes, Inc.)			Operator:		
Street Address: (b)(6) Personal Privacy			Street Address:		
City: (b)(6) Personal Privacy			City:		
State:	Zip Code:	Telephone:	State:	Zip Code:	Telephone:
(b)(6) Personal Privacy			()		
Type of Ownership: <input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal Agency <input type="checkbox"/> State <input type="checkbox"/> Indian			How Initially Identified: <input type="checkbox"/> Citizen Complaint <input type="checkbox"/> PA Petition <input checked="" type="checkbox"/> State/Local Program <input type="checkbox"/> RCRA/CERCLA Notification		
<input type="checkbox"/> County <input type="checkbox"/> Municipal <input type="checkbox"/> Not Specified <input type="checkbox"/> Other			<input type="checkbox"/> Federal Program <input type="checkbox"/> Incidental <input type="checkbox"/> Not Specified <input type="checkbox"/> Other		
3. Site Evaluator Information					
Name of Evaluator: James D. Sliwinski		Agency/Organization: DNR/GAEPD/HWMB		Date Prepared: 9/30/97	
Street Address: 205 Butler St., S.E., 1154 East			City: Atlanta		State: GA
Name of EPA or State Agency Contact: Bill Mundy			Street Address: 205 Butler St., S.E., East Tower, 1154		
City: Atlanta			State: GA	Telephone: (404) 656-7802	
4. Site Disposition (for EPA use only)					
Emergency Response/Removal Assessment Recommendation: <input type="checkbox"/> Yes <input type="checkbox"/> No Date:		CERCLIS Recommendation: <input type="checkbox"/> Higher Priority SI <input type="checkbox"/> Lower Priority SI <input type="checkbox"/> NFRAP <input type="checkbox"/> RCRA <input type="checkbox"/> Other Date:		Signature: Name (typed): Position:	



Potential Hazardous Waste Site
Preliminary Assessment Form - Page 2 of 4

CERCLIS Number:

GA0001897768

5. General Site Characteristics

Predominant Land Uses Within 1 Mile of Site (check all that apply):

- | | | |
|---|--------------------------------------|---|
| <input type="checkbox"/> Industrial | <input type="checkbox"/> Agriculture | <input type="checkbox"/> DOI |
| <input type="checkbox"/> Commercial | <input type="checkbox"/> Mining | <input type="checkbox"/> Other Federal Facility |
| <input checked="" type="checkbox"/> Residential | <input type="checkbox"/> DOD | |
| <input type="checkbox"/> Forest/Fields | <input type="checkbox"/> DOE | <input type="checkbox"/> Other _____ |

Site Setting:

- ☐ Urban
☒ Suburban
☐ Rural

Years of Operation:

Beginning Year 1986

Ending Year 1988

☐ Unknown

Type of Site Operations (check all that apply):

☐ Manufacturing (must check subcategory)

- ☐ Lumber and Wood Products
- ☐ Inorganic Chemicals
- ☐ Plastic and/or Rubber Products
- ☐ Paints, Varishes
- ☐ Industrial Organic Chemicals
- ☐ Agricultural Chemicals (e.g., pesticides, fertilizers)
- ☐ Miscellaneous Chemical Products (e.g., adhesives, explosives, ink)
- ☐ Primary Metals
- ☐ Metal Coating, Plating, Engraving
- ☐ Metal Forging, Stamping
- ☐ Fabricated Structural Metal Products
- ☐ Electronic Equipment
- ☐ Other Manufacturing

☐ Mining

- ☐ Metals
- ☐ Coal
- ☐ Oil and Gas
- ☐ Non-metallic Minerals

☐ Retail

- ☐ Recycling
- ☐ Junk/Salvage Yard
- ☐ Municipal Landfill
- ☐ Other Landfill

☐ DOD

☐ DOE

☐ DOI

☐ Other Federal Facility _____

☐ RCRA

☐ Treatment, Storage, or Disposal

☐ Large Quantity Generator

☐ Small Quantity Generator

☐ Subtitle D

☐ Municipal

☐ Industrial

☐ "Converter"

☐ "Protective Filer"

☐ "Non- or Late Filer"

☐ Not Specified

☒ Other Residential Property

Waste Generated:

- ☒ Onsite
☐ Offsite
☐ Onsite and Offsite

Waste Deposition Authorized By:

- ☐ Present Owner
☒ Former Owner
☐ Present & Former Owner
☐ Unauthorized
☐ Unknown

Waste Accessible to the Public:

- ☒ Yes
☐ No

Distance to Nearest Dwelling,
School, or Workplace:

< 100 Feet

6. Waste Characteristics Information

Source Type:

(check all that apply)

- ☐ Landfill
- ☐ Surface Impoundment
- ☐ Drums
- ☐ Tanks and Non-Drum Containers
- ☐ Chemical Waste Pile
- ☐ Scrap Metal or Junk Pile
- ☐ Tailings Pile
- ☐ Trash Pile (open dump)
- ☐ Land Treatment
- ☐ Contaminated Ground Water Plume (unidentified source)
- ☐ Contaminated Surface Water/Sediment (unidentified source)
- ☒ Contaminated Soil
- ☐ Other _____
- ☒ No Sources

Source Waste Quantity:

(include units)

Tier[#]:

General Types of Waste (check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Metals | <input checked="" type="checkbox"/> Pesticides/Herbicides |
| <input type="checkbox"/> Organics | <input type="checkbox"/> Acids/Bases |
| <input type="checkbox"/> Inorganics | <input type="checkbox"/> Oily Waste |
| <input type="checkbox"/> Solvents | <input type="checkbox"/> Municipal Waste |
| <input type="checkbox"/> Paints/Pigments | <input type="checkbox"/> Mining Waste |
| <input type="checkbox"/> Laboratory/Hospital Waste | <input type="checkbox"/> Explosives |
| <input type="checkbox"/> Radioactive Waste | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Construction/Demolition Waste | |

Physical State of Waste as Deposited (check all that apply):

- ☐ Solid ☐ Sludge ☐ Powder
☒ Liquid ☐ Gas

[#] C = Constituent, W = Wastestream, V = Volume, A = Area



Potential Hazardous Waste Site
Preliminary Assessment Form - Page 3 of 4

CERCLIS Number:

GA0001897768

7. Ground Water Pathway

<p>Is Ground Water Used for Drinking Water Within 4 Miles:</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Is There a Suspected Release to Ground Water:</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>List Secondary Target Population Served by Ground Water Withdraws From:</p> <table><tr><td>0 - 1/4 Mile</td><td>11</td></tr><tr><td>> 1/4 - 1/2 Mile</td><td>33</td></tr><tr><td>> 1/2 - 1 Mile</td><td>207</td></tr><tr><td>> 1 - 2 Miles</td><td>1136</td></tr><tr><td>> 2 - 3 Miles</td><td>2147</td></tr><tr><td>> 3 - 4 Miles</td><td>1394</td></tr><tr><td>Total Within 4 Miles</td><td>4928</td></tr></table>	0 - 1/4 Mile	11	> 1/4 - 1/2 Mile	33	> 1/2 - 1 Mile	207	> 1 - 2 Miles	1136	> 2 - 3 Miles	2147	> 3 - 4 Miles	1394	Total Within 4 Miles	4928
0 - 1/4 Mile	11															
> 1/4 - 1/2 Mile	33															
> 1/2 - 1 Mile	207															
> 1 - 2 Miles	1136															
> 2 - 3 Miles	2147															
> 3 - 4 Miles	1394															
Total Within 4 Miles	4928															
<p>Type of Drinking Water Wells Within 4 Miles (check all that apply):</p> <p><input type="checkbox"/> Municipal <input checked="" type="checkbox"/> Private <input type="checkbox"/> None</p>	<p>Have Primary Target Drinking Water Wells Been Identified:</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If Yes, Enter Primary Target Population:</p> <p>_____ People</p>															
<p>Depth to Shallowest Aquifer:</p> <p><u>150</u> Feet</p> <p>Karst Terrain/Aquifer Present:</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Nearest Designated Wellhead Protection Area:</p> <p><input type="checkbox"/> Underlies Site <input type="checkbox"/> > 0 - 4 Miles <input checked="" type="checkbox"/> None Within 4 Miles</p>															

8. Surface Water Pathway

<p>Type of Surface Water Draining Site and 15 Miles Downstream (check all that apply):</p> <p><input checked="" type="checkbox"/> Stream <input checked="" type="checkbox"/> River <input checked="" type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Bay <input type="checkbox"/> Ocean <input checked="" type="checkbox"/> Other <u>Creek</u></p>	<p>Shortest Overland Distance From Any Source to Surface Water:</p> <p><u>550</u> Feet _____ Miles</p>																				
<p>Is There a Suspected Release to Surface Water:</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Site is Located in:</p> <p><input type="checkbox"/> Annual - 10 yr Floodplain <input type="checkbox"/> > 10 yr - 100 yr Floodplain <input type="checkbox"/> > 100 yr - 500 yr Floodplain <input checked="" type="checkbox"/> > 500 yr Floodplain</p>																				
<p>Drinking Water Intakes Located Along the Surface Water Migration Path:</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Have Primary Target Drinking Water Intakes Been Identified:</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If Yes, Enter Population Served by Primary Target Intakes:</p> <p>_____ People</p>	<p>List All Secondary Target Drinking Water Intakes:</p> <table><thead><tr><th>Name</th><th>Water Body</th><th>Flow (cfs)</th><th>Population Served</th></tr></thead><tbody><tr><td><u>White Oak Creek</u></td><td></td><td><u>16.8</u></td><td><u>14,790</u></td></tr><tr><td>_____</td><td></td><td></td><td></td></tr><tr><td>_____</td><td></td><td></td><td></td></tr><tr><td colspan="3">Total within 15 Miles</td><td><u>14,790</u></td></tr></tbody></table>	Name	Water Body	Flow (cfs)	Population Served	<u>White Oak Creek</u>		<u>16.8</u>	<u>14,790</u>	_____				_____				Total within 15 Miles			<u>14,790</u>
Name	Water Body	Flow (cfs)	Population Served																		
<u>White Oak Creek</u>		<u>16.8</u>	<u>14,790</u>																		

Total within 15 Miles			<u>14,790</u>																		
<p>Fisheries Located Along the Surface Water Migration Path:</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Have Primary Target Fisheries Been Identified:</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>List All Secondary Target Fisheries:</p> <table><thead><tr><th>Water Body/Fishery Name</th><th>Flow (cfs)</th></tr></thead><tbody><tr><td><u>Chattahoochee River</u></td><td><u>4,177</u></td></tr><tr><td>_____</td><td></td></tr><tr><td>_____</td><td></td></tr><tr><td>_____</td><td></td></tr></tbody></table>	Water Body/Fishery Name	Flow (cfs)	<u>Chattahoochee River</u>	<u>4,177</u>	_____		_____		_____											
Water Body/Fishery Name	Flow (cfs)																				
<u>Chattahoochee River</u>	<u>4,177</u>																				



Potential Hazardous Waste Site
Preliminary Assessment Form - Page 4 of 4

CERCLIS Number:
GA0001897768

8. Surface Water Pathway (continued)

Wetlands Located Along the Surface Water Migration Path:

- ☒ Yes
☐ No

Have Primary Target Wetlands Been Identified:

- ☐ Yes
☒ No

List Secondary Target Wetlands:

Water Body	Flow (cfs)	Frontage Miles
Snake Creek	< 26	1
Wahoo Creek	26	6
Chattahoochee	4,177	

Other Sensitive Environments Located Along the Surface Water Migration Path:

- ☒ Yes
☐ No

Have Primary Target Sensitive Environments Been Identified:

- ☐ Yes
☒ No

List Secondary Target Sensitive Environments:

Water Body	Flow (cfs)	Sensitive Environment Type
Creek	≤ 26	Wetland

9. Soil Exposure Pathway

Are People Occupying Residences or
Attending School or Daycare on or Within 200
Feet of Areas of Known or Suspected
Contamination:

- ☒ Yes
☐ No

If Yes, Enter Total Resident Population:

19 People

Number of Workers Onsite:

- ☐ None
☐ 1 - 100
☐ 101 - 1,000
☐ > 1,000

Have Terrestrial Sensitive Environments Been Identified on
or Within 200 Feet of Areas of Known or Suspected
Contamination:

- ☐ Yes
☒ No

If Yes, List Each Terrestrial Sensitive Environment:

10. Air Pathway

Is There a Suspected Release to Air:

- ☐ Yes
☒ No

Enter Total Population on or Within:

Onsite	3
0 - ¼ Mile	44
> ¼ - ½ Mile	134
> ½ - 1 Mile	829
> 1 - 2 Miles	4547
> 2 - 3 Miles	8589
> 3 - 4 Miles	5576
Total Within 4 Miles	19721

Wetlands Located Within 4 Miles of the Site:

- ☒ Yes
☐ No

Other Sensitive Environments Located Within 4 Miles of the Site:

- ☒ Yes
☐ No

List All Sensitive Environments Within ¼ Mile of the Site:

Distance	Sensitive Environment Type/Wetlands Area (acres)
----------	--

Onsite	
--------	--

0 - ¼ Mile	
------------	--

> ¼ - ½ Mile	Wetlands (Wahoo Creek) (1-50 acres)
--------------	-------------------------------------

Appendix B

UNSCANNABLE

MEDIA

(PHOTOGRAPHS)

OVERSIZED

DOCUMENT

Appendix D

FROST ASSOCIATES

88 Founders Village, Clinton, CT 06426
(860) 669-5859 FAX (860) 669-5859

September 16, 1997

To: Environmental Protection Division
205 Butler St., Floyd Towers East, Suite 1154
Atlanta, GA 30334

Attn: James Ussery

Fr: Frost Associates
P.O. Box 495
Essex, Conn 06426

Tel: (203) 767-1254
Fax: (203) 767-7069

Sub: Property of GA Housing & Finance Authority
Newman, GA

CERCLIS:

Job:

Site Longitude: 84-49-03 84.817497
Site Latitude : 33-24-21 33.405830

The CENTRACTS report below identifies the population, households, and private water wells of each Block Group that lies within, or partially within, the 4, 3, 2, 1, .5, and .25, mile "rings" of the latitude and longitude coordinates above. CENTRACTS may have up to ten radii of any length. 1000 block groups, and 15000 block group sides.

CENTRACTS uses the 1990 Block Group population and Block Group house count data found in the Census Bureau's 1990 STF-1A files. The sources of water supply data are from the Bureau's 1990 STF-3A files. The boundary line coordinates of the Block Groups were extracted from the Census Bureau's 1990 TIGER/Line Files.

CENTRACTS reports are created with programs written by Frost Associates, P.O. Box 495, Essex, Conn. The code was written using Microsoft's Quick-Basic Ver. 4.5.

Latitude and Longitude coordinates identifying a site are entered in degrees and decimal degrees. One or more county files holding Block Group boundary lines are selected for use by CENTRACTS by determining whether the site coordinates fall within the minimum and maximum Lat\Lon coordinates of each county in the state.

Each Block Group line segment has Lat\Lon coordinates representing the "From" and "To" ends of that line. All coordinates from the selected county files are read and converted from degrees, decimal degrees to X\Y miles from the site location. Each line segment is then examined whether it lies within or partially within the maximum ring from the site.

The unique Block Group ID numbers of each line segment that lie within the maximum ring are retained. All Block Group boundary lines matching the Block Group numbers are then extracted from the respective county files to obtain all sides of the included Block Groups. Boundary records are then sorted in adjacent side order to determine the shape and area of each Block Group polygon.

A method to solve for the area of a polygon is to take one-half the sum of the products obtained by multiplying each X-coordinate by the difference between the adjacent Y-coordinates. For a polygon with coordinates at adjacent angles A, B, C, D, and E. The formula can be expressed:

$$\text{Area} = 1/2 \{ X_a(Y_e - Y_b) + X_b(Y_a - Y_c) + X_c(Y_b - Y_d) + X_d(Y_c - Y_e) + X_e(Y_d - Y_a) \}$$

For each ring, the selected Block Groups will be inside, outside, or intersected by the ring. When a polygon is intersected, the partial Block Group area within that ring is calculated using the method described below.

When a ring intersects a Block Group, the intersect points are solved and plotted at the points where the ring enters and exits the shape. The chord line, a line within the circle connecting the intersect points is determined. This chord line is used to calculate the segment area, the half moon shape between the chord line and the ring, and the sub-polygon created by the chord line and the Block Group boundaries that lie outside the ring.

The segment area is subtracted from the sub-polygon area to determine the area of the sub-polygon outside the ring. The area outside the ring is then subtracted from the area of the entire polygon to arrive at the inside area. This inside area is then divided by the tract's total area to determine the percentage of area within the ring. This process is repeated for each block group that is intersected by one of the rings. The total area, partial area, and percentage of partial area of those block groups within, or partially within a ring, are held in memory for the report.

On occasion, the algorithm described above is unable to determine the area of the partial area. Within the report program is a "Paint" routine which allows an enclosed shape to be highlighted. Another routine calculates the percentage of highlighted screen pixels to the pixels within the polygon. A manual entry is allowed. Both the "paint" method and manual entry method over ride the calculated method.

CENTRACTS lists, starting on page 4, all Block Groups in State, County, Census Tract, and Block Group ID order that lie within, or partially within, the maximum ring. Each Block Group is identified by a City or Town name and by the Block Group's State, County, Tract and Block Group ID number. Following is the Block Group's 1990 population and house count extracted from the Census Bureau's 1990 STF-1A files.

The next four columns display water source data from the 1990 STF-3A files. The first column is "Units with Public system or private company source of water", followed by "Units with individual well, Drilled, source of water"; "Units with individual well, Dug, source of water" and "Units with Other source of water".

For each ring, CENTRACTS then shows the Block Groups that are within that ring, the Block Group's total area in square miles, the partial area of the Block Group within that ring, and the partial percentage within the ring. The areas of the included Block Group and the partial areas are then totaled.

The last section tallies the demographic data within each ring. The percentage of area for each Block Group is multiplied times the census data for that Block Group and totaled for all Block Group's within the ring. Ring totals are then determined by subtracting the three mile data from the four mile, the two mile from the three mile, one from the two, etc... Population on private wells is calculated using the formula: $((\text{Drilled} + \text{Dug Wells}) / \text{Households}) * \text{Population}$

Property of GA Housing & Finance Authority
Newman, GA

No.	City	Block Group ID	Blk Grp People	House Holds	Public Water	Drilled Wells	Dug Wells	Other
1	Newnan	13077 1701	1 1201	464	107	241	108	15
2	Newnan	13077 1701	2 1947	693	237	339	106	12
3	Newnan	13077 1702	1 1630	548	385	137	50	0
4	Newnan	13077 1702	2 1233	465	211	205	45	0
5	Newnan	13077 1702	3 1137	431	321	60	34	9
6	Newnan	13077 1702	4 966	393	364	0	0	0
7	Newnan	13077 1702	5 773	389	363	0	0	0
8	Newnan	13077 1703	1 2260	816	277	421	140	0
9	Newnan	13077 1703	2 2079	806	423	238	111	0
10	Newnan	13077 1703	3 1778	710	601	94	24	0
11	Newnan	13077 1703	4 1991	871	861	24	0	0
12	Newnan	13077 1703	5 1732	580	611	0	0	0
13	Newnan	13077 1706	1 1248	571	465	64	0	0
14	Newnan	13077 1706	2 657	263	271	0	0	0
15	Newnan	13077 1706	3 1319	473	509	0	0	0
16	Newnan	13077 1706	4 1270	516	420	105	0	0
17	Newnan	13077 1706	5 945	370	228	89	42	0
18	Newnan	13077 1707	1 971	344	203	94	15	0
19	Newnan	13077 1707	2 1720	562	307	219	50	10
20	Newnan	13077 1707	3 1710	602	600	7	10	0
21	Newnan	13077 1707	4 1099	493	480	0	0	0
22	Newnan	13077 1707	5 958	389	389	0	0	0
===	Totals:	=====	=====	=====	=====	=====	=====	=====
			30624	11749	8633	2337	735	46

Property of GA Housing & Finance Authority
Newman, GA

City	Census Tract ID		Tract People	House Count	Public Water	Drilled Wells	Dug Wells	Other Sources
Newnan	13077 1701	1	1201	464	107	241	108	15
Newnan	13077 1701	2	1947	693	237	339	106	12
Newnan	13077 1702	1	1630	548	385	137	50	0
Newnan	13077 1702	2	1233	465	211	205	45	0
Newnan	13077 1702	3	1137	431	321	60	34	9
Newnan	13077 1702	4	966	393	364	0	0	0
Newnan	13077 1702	5	773	389	363	0	0	0
Newnan	13077 1703	1	2260	816	277	421	140	0
Newnan	13077 1703	2	2079	806	423	238	111	0
Newnan	13077 1703	3	1778	710	601	94	24	0
Newnan	13077 1703	4	1991	871	861	24	0	0
Newnan	13077 1703	5	1732	580	611	0	0	0
Newnan	13077 1706	1	1248	571	465	64	0	0
Newnan	13077 1706	2	657	263	271	0	0	0
Newnan	13077 1706	3	1319	473	509	0	0	0
Newnan	13077 1706	4	1270	516	420	105	0	0
Newnan	13077 1706	5	945	370	228	89	42	0
Newnan	13077 1707	1	971	344	203	94	15	0
Newnan	13077 1707	2	1720	562	307	219	50	10
Newnan	13077 1707	3	1710	602	600	7	10	0
Newnan	13077 1707	4	1099	493	480	0	0	0
Newnan	13077 1707	5	958	389	389	0	0	0
Sub Totals:			30624	11749	8633	2337	735	46

Property of GA Housing & Finance Authority
Newman, GA

For Radius of 4 Mi., Circle Area = 50.265482

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
1	Newnan	13077 17011	20.311384	3.480624	17.14
2	Newnan	13077 17012	18.530357	2.920541	15.76
3	Newnan	13077 17075	0.311945	0.311945	100.00
4	Newnan	13077 17022	3.655580	3.629443	99.29
5	Newnan	13077 17023	2.885892	2.885892	100.00
6	Newnan	13077 17024	0.591723	0.591723	100.00
7	Newnan	13077 17025	0.362049	0.362049	100.00
8	Newnan	13077 17031	24.706451	6.883790	27.86
9	Newnan	13077 17032	8.511662	5.137637	60.36
10	Newnan	13077 17033	7.597805	3.978149	52.36
11	Newnan	13077 17034	8.764174	2.261705	25.81
12	Newnan	13077 17035	0.747796	0.747796	100.00
13	Newnan	13077 17061	4.261206	2.367617	55.56
14	Newnan	13077 17062	0.293358	0.293358	100.00
15	Newnan	13077 17063	0.398583	0.398583	100.00
16	Newnan	13077 17064	1.750380	0.508051	29.03
17	Newnan	13077 17065	2.436228	0.545738	22.40
18	Newnan	13077 17071	1.255662	1.255662	100.00
19	Newnan	13077 17072	11.471555	2.865254	24.98
20	Newnan	13077 17073	1.294882	1.294882	100.00
21	Newnan	13077 17074	0.345086	0.345086	100.00
22	Newnan	13077 17021	7.199956	7.199956	100.00
Totals:			127.683723	50.265476	

For Radius of 3 Mi., Circle Area = 28.274334

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
1	Newnan	13077 17011	20.311384	0.580612	2.86
2	Newnan	13077 17012	18.530357	0.560660	3.03
3	Newnan	13077 17075	0.311945	0.311945	100.00
4	Newnan	13077 17022	3.655580	1.613220	44.13
5	Newnan	13077 17023	2.885892	2.885892	100.00
6	Newnan	13077 17024	0.591723	0.591723	100.00
7	Newnan	13077 17025	0.362049	0.362049	100.00
8	Newnan	13077 17031	24.706451	3.373540	13.65
9	Newnan	13077 17032	8.511662	3.815376	44.83
10	Newnan	13077 17033	7.597805	2.271932	29.90
11	Newnan	13077 17034	8.764174	0.423023	4.83
12	Newnan	13077 17035	0.747796	0.641937	85.84
13	Newnan	13077 17061	4.261206	0.193041	4.53
14	Newnan	13077 17062	0.293358	0.236846	80.74
15	Newnan	13077 17063	0.398583	0.129666	32.53
18	Newnan	13077 17071	1.255662	1.255662	100.00
19	Newnan	13077 17072	11.471555	0.847474	7.39
20	Newnan	13077 17073	1.294882	1.217342	94.01
21	Newnan	13077 17074	0.345086	0.345086	100.00
22	Newnan	13077 17021	7.199956	6.617308	91.91

Property of GA Housing & Finance Authority
Newman, GA

Totals: 123.497116 28.274334

For Radius of 2 Mi., Circle Area = 12.566371

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
5	Newnan	13077 17023	2.885892	2.247927	77.89
6	Newnan	13077 17024	0.591723	0.591723	100.00
7	Newnan	13077 17025	0.362049	0.361185	99.76
8	Newnan	13077 17031	24.706451	0.531512	2.15
9	Newnan	13077 17032	8.511662	2.603600	30.59
10	Newnan	13077 17033	7.597805	0.981298	12.92
18	Newnan	13077 17071	1.255662	0.432340	34.43
20	Newnan	13077 17073	1.294882	0.313931	24.24
21	Newnan	13077 17074	0.345086	0.084703	24.55
22	Newnan	13077 17021	7.199956	4.418151	61.36
Totals:			54.751167	12.566370	

For Radius of 1 Mi., Circle Area = 3.141593

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
5	Newnan	13077 17023	2.885892	0.167404	5.80
6	Newnan	13077 17024	0.591723	0.182065	30.77
9	Newnan	13077 17032	8.511662	0.706746	8.30
22	Newnan	13077 17021	7.199956	2.085378	28.96
Totals:			19.189232	3.141593	

For Radius of .5 Mi., Circle Area = 0.785398

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
9	Newnan	13077 17032	8.511662	0.046063	0.54
22	Newnan	13077 17021	7.199956	0.739335	10.27
Totals:			15.711617	0.785398	

For Radius of .25 Mi., Circle Area = 0.196350

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
22	Newnan	13077 17021	7.199956	0.196350	2.73
Totals:			7.199956	0.196350	

===== Site Data =====

Population:	19721.50
Households:	7556.08
Drilled Wells:	1053.30
Dug Wells:	329.36
Other Water Sources:	15.96

===== Partial (RING) data =====

---- Within Ring: 4 Mile(s) and 3 Mile(s) ----

Population:	5576.22
Households:	2149.48
Drilled Wells:	446.68
Dug Wells:	119.11
Other Water Sources:	5.43

** Population On Private Wells: 1467.79

---- Within Ring: 3 Mile(s) and 2 Mile(s) ----

Population:	8589.40
Households:	3212.33
Drilled Wells:	347.76
Dug Wells:	105.43
Other Water Sources:	3.52

** Population On Private Wells: 1211.77

---- Within Ring: 2 Mile(s) and 1 Mile(s) ----

Population:	4547.97
Households:	1822.70
Drilled Wells:	195.94
Dug Wells:	79.15
Other Water Sources:	6.49

** Population On Private Wells: 686.40

---- Within Ring: 1 Mile(s) and .5 Mile(s) ----

Population:	829.28
Households:	310.93
Drilled Wells:	47.57
Dug Wells:	19.94
Other Water Sources:	0.52

** Population On Private Wells: 180.03

Property of GA Housing & Finance Authority
Newman, GA

---- Within Ring: .5 Mile(s) and .25 Mile(s) ----

Population:	134.18
Households:	45.69
Drilled Wells:	11.62
Dug Wells:	4.37
Other Water Sources:	0.00

** Population On Private Wells: 46.96

---- Within Ring: .25 Mile(s) and 0 Mile(s) ----

Population:	44.45
Households:	14.94
Drilled Wells:	3.74
Dug Wells:	1.36
Other Water Sources:	0.00

** Population On Private Wells: 15.17

Appendix E

[illegible]



RELEASE NOTIFICATION/REPORTING FORM

HAZARDOUS SITES RESPONSE PROGRAM
GEORGIA ENVIRONMENTAL PROTECTION DIVISION

(Please type or print legibly)

FOR OFFICE USE ONLY

HSRP ID

RECEIVED

MAR 22 1994

Environmental Protection Div.
Hazardous Waste Mgmt. Branch

PART I - PROPERTY INFORMATION

1. The information provided in this form is for:	2. Which of the following apply to this site? (check all that apply)
<input checked="" type="checkbox"/> Initial Release Notification <input type="checkbox"/> Reportable Quantity Release Reporting (See Question 22 on the back of this form if you check this box.) <input type="checkbox"/> Supplemental Information	<input type="checkbox"/> Release to groundwater <input checked="" type="checkbox"/> Release to soil <input type="checkbox"/> Other releases (e.g. discarded or abandoned substances, etc.)

3	EPA I.D. Number (if applicable)				
4	Site or Facility Name	Property of Georgia Housing & Finance Authority			
5	Site Street Address	20 Lake Shore Dr.			
6	Site City	Newnan	County	Coweta	ZIP 30263
7	Property Owner	Georgia Housing & Finance Authority			
8	Property Owner Mailing Address	60 Executive Park South, Suite 250			
9	Property Owner City	Atlanta	State	GA	ZIP 30329
10	Property Owner Telephone No.	(404) 679-4840			
11	Site Contact Person	Joseph Z. Luttrell	Title	Program Loan Adm.	
12	Company Name	Georgia Housing & Finance Authority			
13	Site Contact Mailing Address	60 Executive Park South, Suite 250			
14	Site Contact City	Atlanta	State	GA	ZIP 30329
15	Site Contact Telephone No.	(404) 679-4840			
16	Facility Owner/Operator	N/A	Title		
17	Company Name				
18	Facility Owner/Operator Mailing Address				
19	Facility Owner/Operator City		State		ZIP
20	Facility Owner/Operator Telephone No.				

21. SITE SUMMARY - Attach a summary (no longer than one page) that gives a general description of the property, the areas affected by the release both within and beyond the property boundaries, and any actions taken to investigate, clean up or otherwise remediate the property. In addition to the one page summary, other information concerning the property may also be attached.

REQUIRED ATTACHMENT - Along with this form, you **MUST** submit original of a USGS topographical map (1:24000) with the geographic center of the site clearly marked. See the instructions for information on how to obtain an original of the map on which your site is located.

FOR OFFICE USE ONLY

Quadrangle Name: _____

Latitude: _____

Longitude: _____

22. ADDITIONAL INFORMATION FOR REPORTABLE QUANTITY RELEASE REPORTING - If you checked the box for Reportable Quantity Release Reporting in Question 1 on the other side of this form, you must also attach the following information:

- A. A description of the property boundaries of this site and adjacent properties, either by legal description, survey plat, tax map, or other means.
- B. A **DETAILED** description of the nature and the known or estimated extent of the area contaminated, both within and beyond the site's property boundaries. Drawings or tracings on attached maps may be used.

23. CERTIFICATION - I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

JOSEPH Z. LUTTRELL

Program Loan Administrator

NAME (Please type or print)

TITLE

SIGNATURE

*Joseph Z. Luttrell*3/22/94
DATE

21. SITE SUMMARY

To the best of Georgia Housing and Finance Authority's information, in 1986 the private owners of the residence located at 20 Lake Shore Drive, Newnan, Georgia, retained Ryder Pest Control Company to treat the premises for termites. Treatments were made from approximately March of 1986 to 1988 utilizing chlordane termiticide. Information has been received that a derivative, heptachlor, was also used, but testing to date has not indicated reportable quantities of heptachlor. The private owner at the time has alleged that excessive quantities of the termiticide were used in treating the premises.

During May, 1988, it has been reported to the Authority that some remediation of the site was performed, including soil removal and removal and replacement of a wooden deck at the rear of the residence. Subsequently, the private owner abandoned the property, and a foreclosure resulted. GHFA acquired the property involuntarily pursuant to its loan servicing agreement subsequent to foreclosure.

Testing of the site in 1991 provided information that a high level of termiticide remained present in the foundation, soils, and interior of the dwelling. It is unknown whether or not the termiticide was applied in accordance with labelling instructions, or whether the release or present level exceeded reportable quantities.

Currently, GHFA is seeking to have a licensed environmental cleanup firm do basic cleaning of the premises and provide for disposal of any contaminated items found through the pest control company. At the conclusion of the cleaning, comprehensive testing will be accomplished to determine the need for further remedial action. GHFA will base follow-on activities based upon the results of the preliminary clean up activity.

While the former private owner indicated exposure to himself and his family, the residence has been unoccupied and locked since they abandoned the premises.

PART II - RELEASE INFORMATION

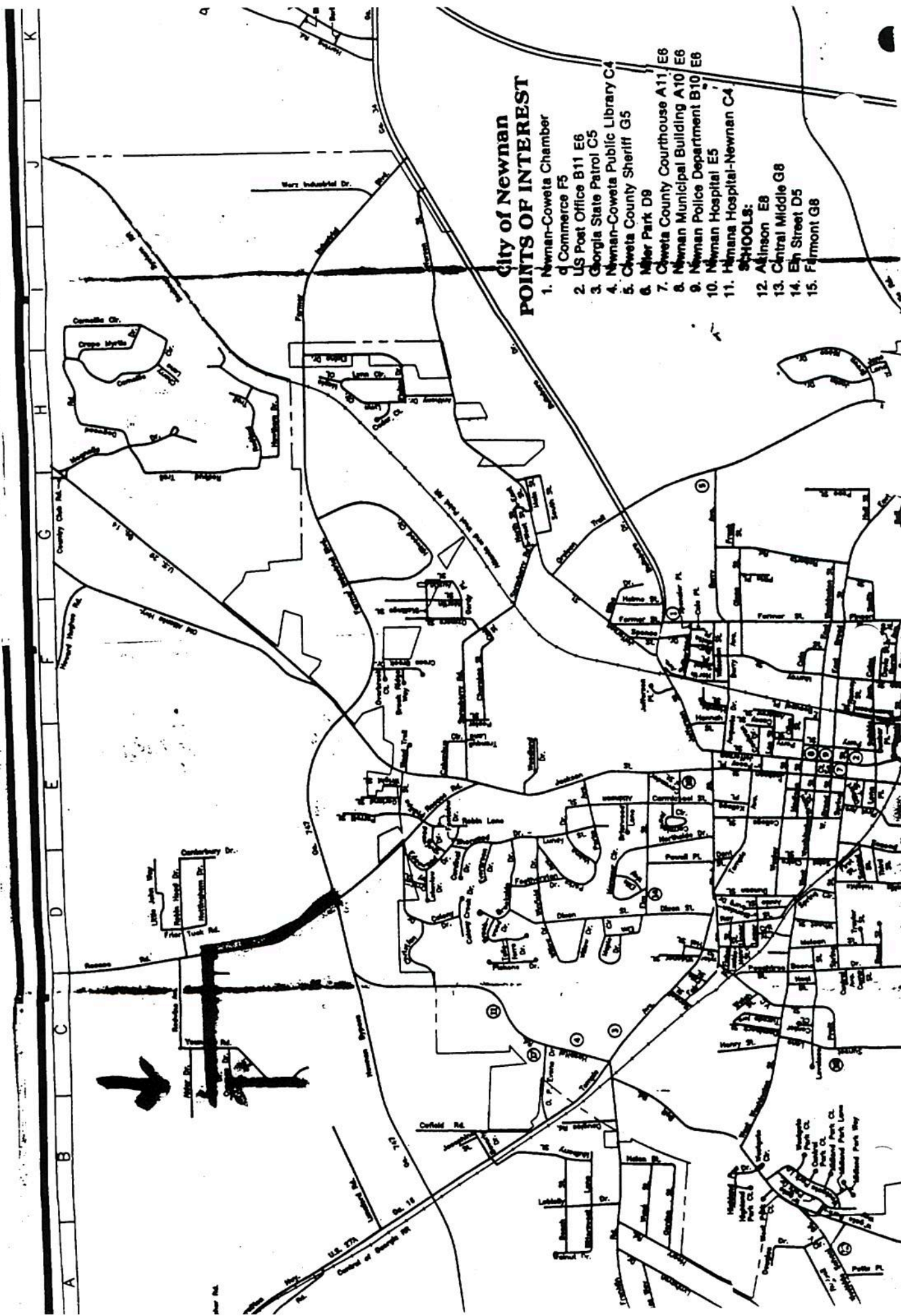
Provide the following information for EACH regulated substance release at the site. Complete a separate page for each regulated substance released.

1. Chemical Name (see instructions): Chlordane
2. CAS Number (see instructions): 57749
3. Physical State:
 - ☐ Solid
 - ☐ Powder/Ash
 - ☐ Liquid/Gas/Sludge
 - ☒ Unknown
4. Quantity of regulated substance released (lbs., cu. yd., etc.): Unknown as of 12/91
5. Highest Known Concentration (specify units): In Soil: 36 ppm In Groundwater: Unknown
6. Surface Area of soil affected by this release: Soil and foundation around unoccupied dwelling
7. Depth of this release in soil (max./min.): Unknown
8. Source of this release (i.e. drums, tanks, etc.): Pest Control Company Pesticide Treatment
9. Release Date(s): March, 1986, Same remediation performed by prior owner in May, 1988.
10. Access to the area affected by this release:
 - ☐ Inaccessible: A 24-hour surveillance system, or a completely closed barrier or fence to prevent entry.
 - ☐ Limited Access: Less than 24-hour surveillance system, and/or a barrier or fence that is partially open.
 - ☒ Unlimited Access: No surveillance, and no barrier or fence.
11. What is the distance between the area affected by this release and the nearest drinking water well (including wells on the site)?
 - ☐ Less than 0.5 miles
 - ☐ 0.5 to 1 mile
 - ☐ 1 to 2 miles
 - ☐ 2 to 3 miles
 - ☐ Greater than 3 miles
 - ☒ Unknown
12. What is the approximate distance from the edge of the area affected by this release to the nearest residence, playground, day care facility, workplace, school or other regularly occupied building or area?
 - ☒ Less than 300 feet
 - ☐ 301 to 1000 feet
 - ☐ 1001 to 3000 feet
 - ☐ 3001 to 5280 feet
 - ☐ Greater than 1 mile
 - ☐ Unknown
13. Has a human been exposed to this release?
 - ☒ Yes
 - ☐ Suspected
 - ☐ No
 - ☐ Unknown
14. What is the approximate thickness of the cover (if any) over the area affected by this release? Unknown
15. For soil releases, what is the type of material covering this release?
 - ☐ A permanent or otherwise maintained, essentially impenetrable non-earthen material such as concrete or asphalt
 - ☐ An engineered and maintained earthen material or compacted fill or a high density synthetic material
 - ☒ Loose earthen fill or native soil
 - ☐ No cover
 - ☒ Other Foundation and structure of unoccupied dwelling.

PART II - RELEASE INFORMATION

Provide the following information for EACH regulated substance release at the site. Complete a separate page for each regulated substance released.

1. Chemical Name (see instructions): Heptachlor
2. CAS Number (see instructions): 76448
3. Physical State:
 - ☐ Solid
 - ☐ Powder/Ash
 - ☐ Liquid/Gas/Sludge
 - ☒ Unknown
4. Quantity of regulated substance released (lbs., cu. yd., etc.): Unknown
5. Highest Known Concentration (specify units): In Soil: Unknown In Groundwater: Unknown
6. Surface Area of soil affected by this release: Soil and Foundation around unoccupied dwelling
7. Depth of this release in soil (max./min.): Unknown
8. Source of this release (i.e. drums, tanks, etc.): Pest Control Company Pesticide Treatment
9. Release Date(s): March, 1986. Some remediation performed by prior owner in May, 1988.
10. Access to the area affected by this release:
 - ☐ Inaccessible: A 24-hour surveillance system, or a completely closed barrier or fence to prevent entry.
 - ☐ Limited Access: Less than 24-hour surveillance system, and/or a barrier or fence that is partially open.
 - ☒ Unlimited Access: No surveillance, and no barrier or fence.
11. What is the distance between the area affected by this release and the nearest drinking water well (including wells on the property)?
 - ☐ Less than 0.5 miles
 - ☐ 0.5 to 1 mile
 - ☐ 1 to 2 miles
 - ☐ 2 to 3 miles
 - ☐ Greater than 3 miles
 - ☒ Unknown
12. What is the approximate distance from the edge of the area affected by this release to the nearest residence, playground, day care facility, workplace, school or other regularly occupied building or area?
 - ☒ Less than 300 feet
 - ☐ 301 to 1000 feet
 - ☐ 1001 to 3000 feet
 - ☐ 3001 to 5280 feet
 - ☐ Greater than 1 mile
 - ☒ Unknown
13. Has a human been exposed to this release?
 - ☒ Yes
 - ☐ Suspected
 - ☐ No
 - ☐ Unknown
14. What is the approximate thickness of the cover (if any) over the area affected by this release? Unknown
15. For soil releases, what is the type of material covering this release?
 - ☐ A permanent or otherwise maintained, essentially impenetrable non-earth material such as concrete or asphalt
 - ☐ An engineered and maintained earthen material or compacted fill or a high density synthetic material
 - ☒ Loose earthen fill or native soil
 - ☐ No cover
 - ☒ Other Foundation and Structures of unoccupied dwelling.



CITY OF NEWNAN POINTS OF INTEREST

1. Newnan-Coweta Chamber of Commerce F5
2. US Post Office B11 E6
3. Georgia State Patrol C5
4. Newnan-Coweta Public Library C4
5. Coweta County Sheriff G5
6. Miller Park D8
7. Coweta County Courthouse A11, E8
8. Newnan Municipal Building A10, E8
9. Newnan Police Department B10, E6
10. Newnan Hospital E5
11. Newnan Hospital-Newnan C4
- SCHOOLS:**
12. Atkinson E8
13. Central Middle G8
14. Elm Street D5
15. Fairmont G8



Governor
Zell Miller

Board of Directors
Wit B. Carson, III
Chairman

Millard Bowen
Joyce B. Colborn
Zack D. Cravey, Jr.
Dan W. Hammack
Fred Hand, Jr.
Henry M. Huckaby
Alan E. Pinado
Carter Smyre
Dorothy Towson

Governor's Designee
Cynthia D. Wright

14 February, 1995

Department of Natural Resources
Environmental Protection Division
Hazardous Sites Response Program
Attn: Katherine Shumake
205 Butler Street, SE
Ste. 1162
Atlanta, Georgia 30334

RE: Contaminated Property
GHFA # 0805814727
(b)(6) Personal Privacy
20 Lakeshore Drive Newnan, GA 30263
Foreclosed by GHFA: 06/05/90

FEB 16 1995

Waste Mgmt. Branch

Dear Ms. Shumake,

Attached please find a copy of the original survey for the above referenced property per your request to Joe Luttrell. If you need anything further, please do not hesitate to call either Joe or myself.

Sincerely,

Judy Freeman
Foreclosure/Default Monitor
(404) 679-0653

Suite 250
60 Executive Park South, N.E.
Atlanta, Georgia 30329-2231

Phone (404) 679-4840
FAX (404) 679-4837
Toll Free Inside Georgia
(800) 359-4663

Hearing Impaired
TDD (404) 679-4915
TDD (800) 736-1155





IN MY OPINION, THIS IS A TRUE AND CORRECT REPRESENTATION OF THE PLATTED PROPERTY AND HAS BEEN PREPARED IN CONFORMITY WITH THE STANDARDS AND REQUIREMENTS OF LAW

1 HAVE THIS DAY EXAMINED THE
FIA OFFICIAL FLOOD HAZARD MAP,
AND FOUND THAT THIS PROPERTY
IS NOT LOCATED IN AN AREA
DESIGNATED AS A SPECIAL FLOOD
HAZARD AREA.

<p>SURVEY FOR</p> <p>CURTIS B. SHIRLEY A. YOUNG</p>		<p>DATE 7/17/05</p>	<p>APPROVED BY</p>	<p>DRAWN BY TOMMY</p>
<p>LOT 12 PINECREST S/D PART ONE</p> <p>LAND LOT 5 ILAND OIST 5 COWETA COUNTY, GEORGIA</p>		<p>SURVEY BY</p> <p><i>Tom. A. Shirley</i></p>		
				<p>DRAWING NUMBER</p> <p>84095</p>



LAW

ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

June 5, 1996

RECEIVED

JUN 06 1996

HAZ. SITES RESPONSE PROG.

Mr. Tim Cash
Georgia Department of Natural Resources
Environmental Protection Division
205 Butler Street
Atlanta, Georgia 30334-4910

Subject: **Hazardous Site Inventory Site No. 10031**
Property of Georgia Housing and Finance Authority
20 Lake Shore Drive
Newnan, Georgia
Law Project 13220-5-5053

Dear Mr. Cash:

Law Engineering and Environmental Services, Inc. (Law), on behalf of our client, the Georgia Housing and Finance Authority (GHFA), is submitting this request to the Georgia Environmental Protection Division (EPD) to remove the subject site from the Hazardous Site Inventory (HSI) based on the requirements of Rule 391-3-19-.05 (4), "Removal of sites from the Hazardous Site Inventory." The basis of this request is that at the time of the listing the site had not had a release which either exceeded a reportable quantity or posed a danger to human health or the environment. At the time of listing the site had quantities of chlordane and heptachlor which should have resulted in an on-site pathway score of zero, therefore not exceeding a reportable quantity and not requiring listing on the HSI. The facts supporting this request are presented in the following paragraphs.

BACKGROUND

In 1986 the house referenced above was treated several times with the termiticide chlordane. The information provided to us indicated that in March 1986 the surface of the wooden deck at the rear of the house was sprayed with chlordane. Apparently chlordane was tracked into the living areas of the house. Subsequent sampling (by others) of the interior of the house, including air samples from the living areas and basement and wipe samples of carpet and HVAC ducts indicated the presence of chlordane. Bulk samples of soils from around the house foundation walls and from the area of the deck also indicated the presence of chlordane.

In a subsequent investigation regarding the spraying of the deck, the Georgia Department of Agriculture found "that an employee working under [the pest control operator's] supervision made a pesticide application in a manner not suitable, and inconsistent with labeling restrictions to a wooden deck at the residence of (b)(6) Personal 20 Lakeshore Drive, Newnan, Georgia...."

The deck was subsequently removed and replaced by the pest control operator in May 1988, and a portion of the soil beneath the deck was also removed. Confirmatory sampling of the soils during removal was not conducted. In March and April 1996, the house itself was demolished and removed to an appropriate landfill.

HSRA/HSI ISSUES

In March 1994, based on the data available to it at that time, the GHFA notified EPD as to the possible contamination at the site under Rule 391-3-19-.04 of HSRA. Based on the information provided to EPD by the GHFA, the site was listed on the Hazardous Site Inventory on July 1, 1994.

Since that time, Law has reviewed the data collected by others and has conducted additional sampling in the vicinity of the deck. Earlier studies by others reported soil chlordane concentrations of 16,000 micrograms per kilogram (ug/kg), 24,000 ug/kg, and 36,000 ug/kg (16,24, and 36 ppm) from the east, north, and west sides of the house respectively (ETI 1991)(see Figure 1). However, the chlordane levels at these locations are consistent with residual values from a normal application, and appear to be the result of normal application of the pesticide. Therefore the residual chlordane at locations other than the deck area would fall under the exclusion from notification of Rule 391-3-19-.04(2)(f), as having been applied in a manner consistent with its label.

According to Mr. Greg Bowman of the National Pest Control Association a "rule of thumb" target residual soil concentration of chlordane in soil is 100 ppm. Mr. Bowman stated that a much lower value would be effective to control termites, but the higher value is used to assure that an adequate application of chlordane was made (personal communication). Mr. Jim Harron of the Georgia Department of Agriculture stated that when chlordane was used, the state required a soil residual value of 100 ppm (personal communication). A study by Delaplane and La Fage (1990) reported that mean residue levels sampled at 30 houses in New Orleans varied from 22 to 2540 ppm. Therefore the reported residual values of 16 ppm, 24 ppm, and 36 ppm at the house in 1991 are well within the range of residual values one would expect in soils treated to control termites.

The reported value of 140,000 ug/kg (Dunn 4/1988) at the "end of deck" was prior to the reported removal of the deck and underlying soil in May 1988. However, confirmation samples were not taken at the time of the soil removal in 1988. Subsequently, a 1991 sample taken at the "end of deck" contained chlordane at a level of only 10 ug/kg (ETI, 1991).

In September 1995, to further evaluate the actual soil concentrations in the area of the mis-application, Law collected six shallow soil samples at five locations in the area of the deck, and tested the samples for chlordane and heptachlor (a common contaminant in the pesticide chlordane)(see Figure 2). The results are presented on Table 1. All results are below the notification trigger levels of 9.2 mg/kg for chlordane and 0.66 mg/kg for heptachlor, and are also below the Type I risk reduction standards for residential property. Because chlordane is relatively immobile and persistent in the soil environment, we believe the September 1995 samples are reasonably representative of the conditions at the site in July 1994 at the time of the listing on the HSI.

Using the highest detected concentration of chlordane in the deck area, and assuming that drippage from the spraying of the deck would have affected no more than a foot of soil below the deck, we calculate that the total weight of chlordane in the deck area was not more than 0.011 pounds (see Appendix A for the calculations). Applying this quantity of chlordane to the scoring equation of Table 2 (of the *Guidance Manual for the Reportable Quantity Screening Method* dated February 10, 1994) would result in the quantity of chlordane being much less than the threshold quantity of one pound, and would result in a total pathway score of zero.

Based on the above information, we respectfully request that the Georgia EPD remove the subject site from the HSI under the provisions of Chapter 391-3-19-.05(4)(a) in that the site "had not had a release which ...exceeded a reportable quantity...at the time of listing the site on the Hazardous Site Inventory."

SUMMARY

We believe the following items support the position that the site did not have a release which exceeded a reportable quantity at the time of listing the site on the Hazardous Site Inventory:

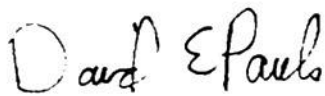
- Any contamination of the house itself is not a release to the environment within the meaning of the HSRA rules. Contamination of the house has been dealt with separately, and the house has been demolished and removed to an appropriate landfill.
- The soil chlordane values reported by ETI in 1991 appear to be due to normal foundation application and therefore are subject to the exclusion of Rule 391-3-19-.04(2)(d) as having been applied in a manner consistent with its label.
- Only the chlordane associated with the improper application to the deck would potentially require notification, but none of the soil samples from the deck area exceed the notification criteria. Further, based on the September 1995 soil samples and reasonable assumptions regarding the volume of affected soil, the quantity of chlordane is significantly less than the threshold quantity in Table 2 (of the *Guidance Manual for the Reportable Quantity Screening Method* dated February 10, 1994) therefore the total pathway score would be zero.

Based on the above we respectfully request that EPD remove the subject site from the HSI on the basis that a reportable quantity was not present at the time of the listing of the site.

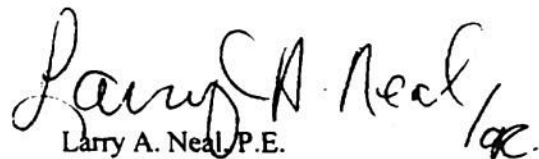
If you have any questions, please call us at 770/421-3400.

Sincerely,

LAW ENGINEERING AND ENVIRONMENTAL, INC.



David E. Pauls, P.E.
Principal



Larry A. Neal, P.E.
Principal

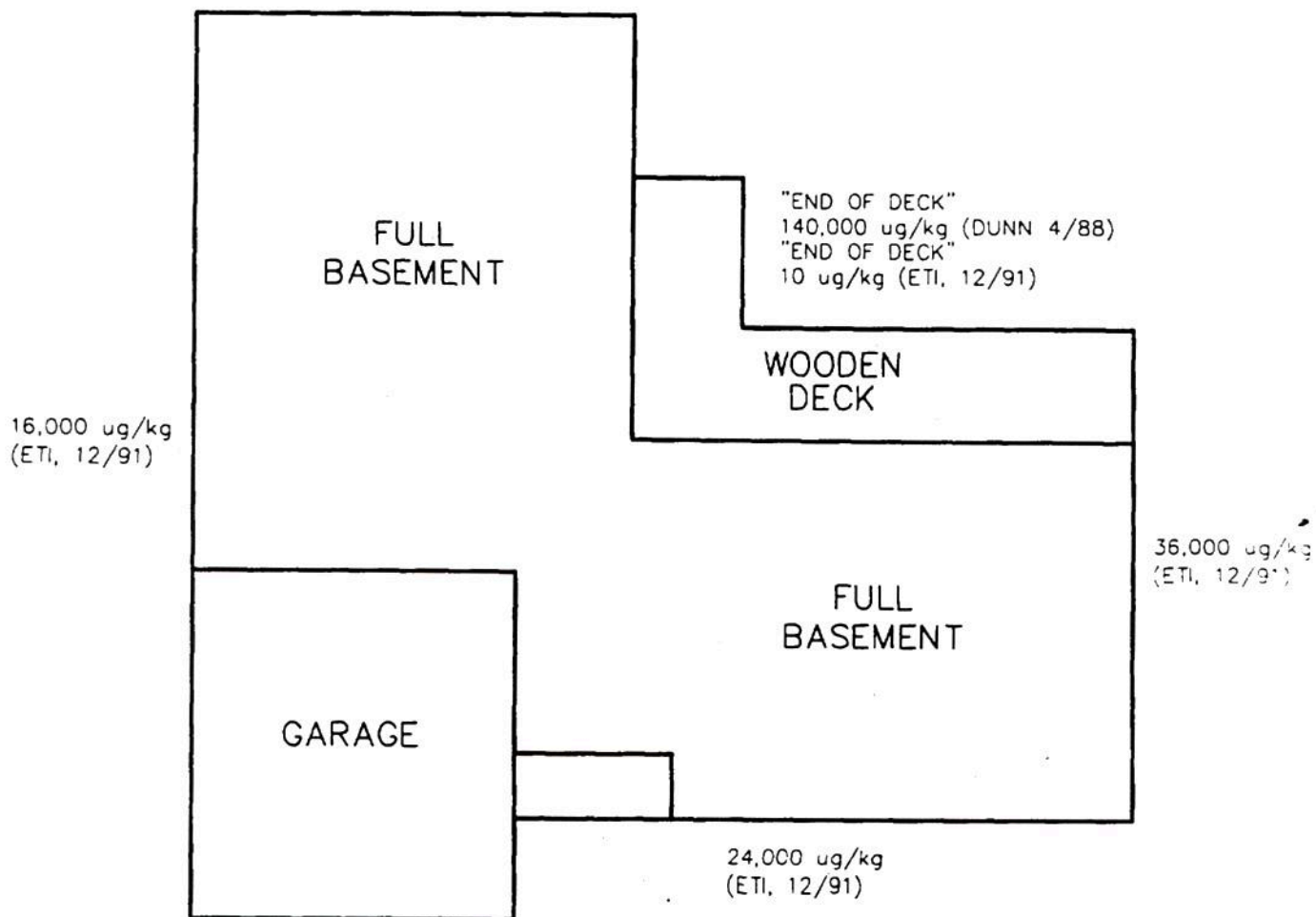
REFERENCES

- Bowman, Greg (National Pest Control Association , personal communication), May 6, 1996.
- Delaplane, KS and La Fage, JP 1990. Variable chlordane residues in soil surrounding house foundations in Louisiana, USA. Bull Environ Contam Toxicol 45:675-680. (as referenced in U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, draft Toxicological Profile for Chlordane, October 1992.)
- Department of Agriculture, State of Georgia, in the matter of: James Rider, Rider Pest Control, 128 Jefferson Street, Newnan, Georgia 30263, ORDER OF THE COMMISSIONER, November 18, 1987.
- Dunn Laboratories, RE: Soil Samples Received April 21, 1988, Chlordane Analysis, May 20, 1988.
- Environmental Toxicology International, Inc. (ETI), RE: Curtis and Shirley Young v. Ryder Pest Control, February 17, 1992.
- Harron, James (Georgia Department of Agriculture, personal communication), May 8, 1996.
- Law Engineering, Subject: Peer Review of Termiticide Sampling Reports, 20 Lake Shore Drive & 28 Garden Street, Newnan, Georgia, Law Associates Project No. 11922328.00, December 14, 1992.

TABLE 1
20 Lakeshore Drive, Newnan, Georgia
Project No. # 13220-5-5053

Sample ID	Sample, Depth, Inches	Heptachlor $\mu\text{g/kg}$ (DL)	Chlordane $\mu\text{g/kg}$ (DL)
SS-1	6-12	ND (5.0)	ND (50)
SS-2	6-12	ND (5.0)	180 (50)
SS-3	6-12	ND (5.0)	ND (50)
SS-4	6-12	7.1 (5.0)	230 (50)
SS-5	6-12	ND (5.0)	86 (50)
SD-1	6-12	ND (5.0)	140 (50)

SD-1 is duplicate of SS-2



NOTE: VALUES SHOWN ARE
CHLORDANE IN SOIL

NOT TO SCALE

20 LAKESHORE DRIVE
NEWMAN, GEORGIA



LAW

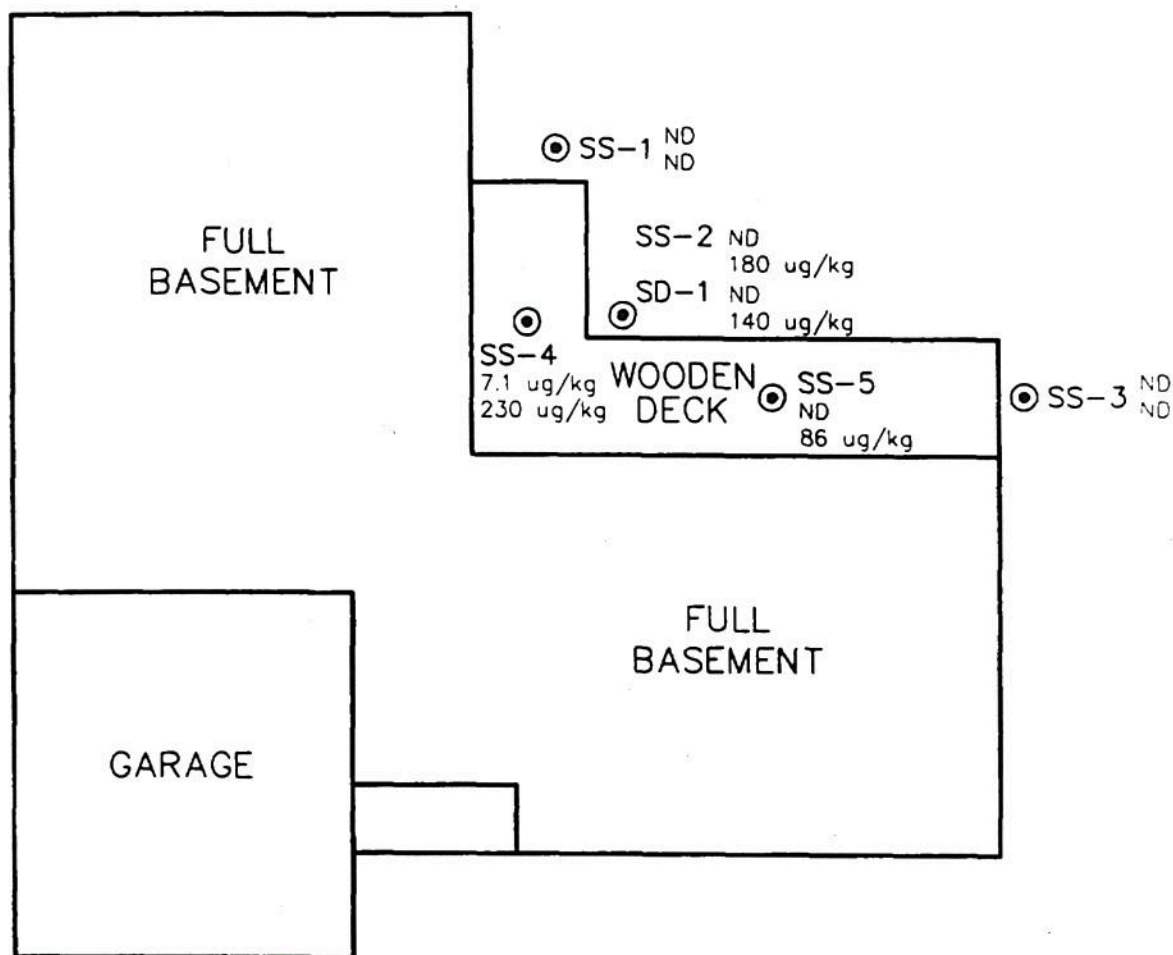
ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

FIGURE 1

JOB NO. 13220-5-5053



LAYER/LEVEL



LEGEND

⊙ SOIL SAMPLE LOCATION (SEPTEMBER 8, 1995)

XX ug/kg — HEPTACHLOR
XX ug/kg — CHLORDANE

NOT TO SCALE

20 LAKESHORE DRIVE
NEWNAN, GEORGIA



LAW
ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

FIGURE 2

JOB NO. 13220-5-5053

PREPARED BY/DATE

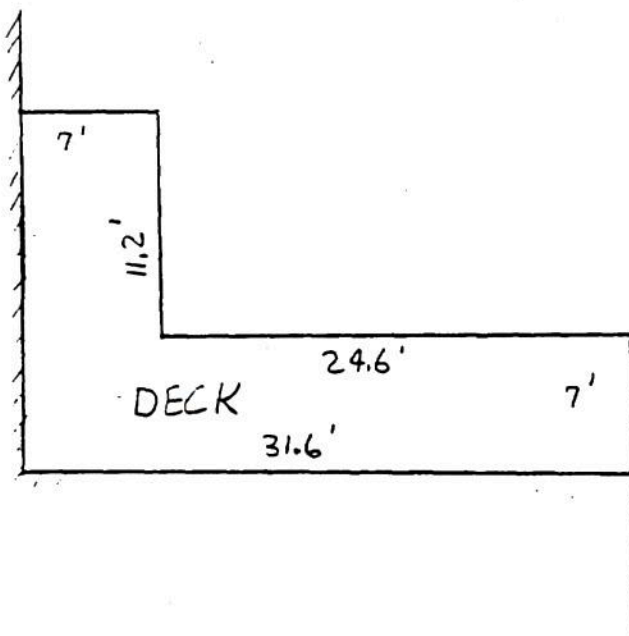
Appendix A

Calculations

20 Lakeshore Drive, Newnan, GA
Law Job # 13220-5-5053

by: D E Pauls
3/29/96

Estimate potential quantity of chlordane which may be
in the soil as a result of spraying the deck



HOUSE =

Calculate area of deck plus 3-feet beyond on the yard side

$$A = (7+3)(11.2') + (31.6+3)(7+3) = 112 + 346 = 458 \text{ ft}^2$$

If affected soil is 1' thick, then volume is 458 ft^3

Using soil at 100 #/ft^3 : $458 \text{ ft}^3 \times 100 \text{ #/ft}^3 = 45,800 \text{ # soil}$

Using highest measured chlordane concentration ($230 \mu\text{g/kg}$ or 230

$$\text{Weight of chlordane} = 45,800 \text{ #} \times 230 \times 10^{-9} = 0.0105 \text{ #}$$

Appendix B

Laboratory Data



LAW

ENGINEERING AND ENVIRONMENTAL SERVICES

September 21, 1995

Gerald Muller
Law Engineering and Environmental Services, Inc.
112 TownPark Drive
Kennesaw, GA 30144

Subject: **Chemical analysis of samples received on 09/08/95**
Project Number: 13220-5-5053

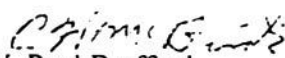
Dear Mr. Muller:

Law Environmental National Laboratories has completed its analysis of your samples and reports the results on the following pages. These results relate only to the contents of the samples as submitted. This report shall not be reproduced except in full without the approval of Law Environmental National Laboratories.

If there are any questions, please do not hesitate to contact Rhonda K. Arnwine at (404)-421-3306

Sincerely,

LAW ENVIRONMENTAL NATIONAL LABORATORIES


W. Paul Brafford
Laboratory Manager

WPB:pah

Enclosures: **Data Report**
Invoice

LAW ENVIRONMENTAL, INC.
NATIONAL LABORATORIES

112 TOWN PARK DRIVE • KENNESAW, GA 30144
(404) 421-3400 • FAX (404) 421-3486

LAW ENVIRONMENTAL NATIONAL LABORATORIES
TEST DATA REPORT

Date 09/21/95
Page 1

--- Project Information ---

Lab Number : 95-2406-01
Project No. : 13220-5-5053
Project Name : GEORGIA HFA

Cust. No. :

Manager: GERALD MUELLER

--- Sample Information ---

Station ID : SS-1
Matrix : SO
Type : GRAB
Collector : GRM

Sampled Date/Time : 09/08/95 09:30
Received Date/Time : 09/08/95 13:15
Received From/By : GM/JA
Chain of Custody : 32738
Number of Containers : 1

Parameter.....	Method....	Units	DL.....	Results...	Test Date	Analy
-- INORGANIC CHEMISTRY RESULTS --						
Moisture (Oven Dried @ 105C)	D2216 M	%	1.0	13	09/20/95	RH
-- ORGANIC PREP RESULTS --						
Ext/Pest-SO/Son	3550/8080			N/A	09/19/95	SCC
Florisil Cleanup	EPA 3620			N/A	09/19/95	SCC
Sulfur Cleanup (with Copper)	EPA 3660			N/A	09/19/95	SCC
-- GC ORGANIC ANALYSIS (SO) RESULTS --						
Heptachlor	EPA 8080	ug/kg	5.0	ND	09/20/95	BT
ordane	EPA 8080	ug/kg	50	ND	09/20/95	BT

Remarks:

DL = Detection Limit

ND = Not Detected at the DL

Unless otherwise noted, all soil test results are calculated based on dry weight.

Signed

C. H. McEneaney

LAW ENVIRONMENTAL NATIONAL LABORATORIES
TEST DATA REPORT

Date 09/21/95
Page 1

--- Project Information ---

Lab Number : 95-2406-02
Project No. : 13220-5-5053
Project Name : GEORGIA HFA

Cust. No. :

Manager: GERALD MUELLER

--- Sample Information ---

Station ID : SS-2
Matrix : SO
Type : GRAB
Collector : GRM

Sampled Date/Time : 09/08/95 09:45
Received Date/Time : 09/08/95 13:15
Received From/By : GM/JA
Chain of Custody : 32738
Number of Containers : 1

Parameter.....	Method....	Units	DL.....	Results...	Test Date	Analy
-- INORGANIC CHEMISTRY RESULTS --						
Moisture (Oven Dried @ 105C)	D2216 M	%	1.0	12	09/20/95	RH
-- ORGANIC PREP RESULTS --						
Ext/Pest-SO/Son	3550/8080			N/A	09/19/95	SCC
Florisil Cleanup	EPA 3620			N/A	09/19/95	SCC
Sulfur Cleanup (with Copper)	EPA 3660			N/A	09/19/95	SCC
-- GC ORGANIC ANALYSIS (SO) RESULTS --						
Heptachlor	EPA 8080	ug/kg	5.0	ND	09/20/95	BT
ordane	EPA 8080	ug/kg	50	180	09/20/95	BT

Remarks:

DL = Detection Limit

ND = Not Detected at the DL

Unless otherwise noted, all soil test results are calculated based on dry weight.

Signed

C. H. McBrat

LAW ENVIRONMENTAL NATIONAL LABORATORIES
TEST DATA REPORT

Date 09/21/95
Page 1

--- Project Information ---

Lab Number : 95-2406-03
Project No. : 13220-5-5053
Project Name : GEORGIA HPA

Cust. No. :

Manager: GERALD MUELLER

--- Sample Information ---

Station ID : SS-3
Matrix : SO
Type : GRAB
Collector : GRM

Sampled Date/Time : 09/08/95 10:00
Received Date/Time : 09/08/95 13:15
Received From/By : GM/JA
Chain of Custody : 32738
Number of Containers : 1

Parameter.....	Method....	Units	DL.....	Results...	Test Date	Anal
-- INORGANIC CHEMISTRY RESULTS --						
Moisture (Oven Dried @ 105C)	D2216 M	%	1.0	15	09/20/95	RH
-- ORGANIC PREP RESULTS --						
Ext/Pest-SO/Son	3550/8080			N/A	09/19/95	SCC
Florisil Cleanup	EPA 3620			N/A	09/19/95	SCC
Sulfur Cleanup (with Copper)	EPA 3660			N/A	09/19/95	SCC
-- GC ORGANIC ANALYSIS (SO) RESULTS --						
Heptachlor	EPA 8080	ug/kg	5.0	ND	09/20/95	BT
Endane	EPA 8080	ug/kg	50	ND	09/20/95	BT

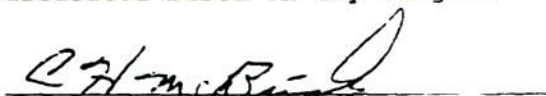
Remarks:

DL = Detection Limit

ND = Not Detected at the DL

Unless otherwise noted, all soil test results are calculated based on dry weight.

Signed



LAW ENVIRONMENTAL NATIONAL LABORATORIES
TEST DATA REPORT

Date 09/21/95
Page 1

--- Project Information ---

Lab Number : 95-2406-04
Project No. : 13220-5-5053
Project Name : GEORGIA HFA

Cust. No. :

Manager: GERALD MUELLER

--- Sample Information ---

Station ID : SS-4
Matrix : SO
Type : GRAB
Collector : GRM

Sampled Date/Time : 09/08/95 10:30
Received Date/Time : 09/08/95 13:15
Received From/By : GM/JA
Chain of Custody : 32738
Number of Containers : 1

Parameter.....	Method....	Units	DL.....	Results...	Test Date	Analy
-- INORGANIC CHEMISTRY RESULTS --						
Moisture (Oven Dried @ 105C)	D2216 M	%	1.0	11	09/20/95	RH
-- ORGANIC PREP RESULTS --						
Ext/Pest-SO/Son	3550/8080			N/A	09/19/95	SCC
Florisil Cleanup	EPA 3620			N/A	09/19/95	SCC
Sulfur Cleanup (with Copper)	EPA 3660			N/A	09/19/95	SCC
-- GC ORGANIC ANALYSIS (SO) RESULTS --						
tachlor	EPA 8080	ug/kg	5.0	7.1	09/20/95	BT
ordane	EPA 8080	ug/kg	50	230	09/20/95	BT

Remarks:

DL = Detection Limit

ND = Not Detected at the DL

Unless otherwise noted, all soil test results are calculated based on dry --

Signed

C. H. Mueller

LAW ENVIRONMENTAL NATIONAL LABORATORIES
TEST DATA REPORT

Date 09/21/95

Page 1

--- Project Information ---

Lab Number : 95-2406-05
Project No. : 13220-5-5053
Project Name : GEORGIA HFA

Cust. No. :

Manager: GERALD MUELLER

--- Sample Information ---

Station ID : SS-5
Matrix : SO
Type : GRAB
Collector : GRM

Sampled Date/Time : 09/08/95 11:00
Received Date/Time : 09/08/95 13:15
Received From/By : GM/JA
Chain of Custody : 32738
Number of Containers : 1

Parameter.....	Method....	Units	DL.....	Results...	Test Date	Analy
-- INORGANIC CHEMISTRY RESULTS --						
Moisture (Oven Dried @ 105C)	D2216 M	%	1.0	8.0	09/20/95	RH
-- ORGANIC PREP RESULTS --						
Ext/Pest-SO/Son	3550/8080			N/A	09/19/95	SCC
Florisil Cleanup	EPA 3620			N/A	09/19/95	SCC
Sulfur Cleanup (with Copper)	EPA 3660			N/A	09/19/95	SCC
-- GC ORGANIC ANALYSIS (SO) RESULTS --						
P tachlor	EPA 8080	ug/kg	5.0	ND	09/20/95	BT
C ordane	EPA 8080	ug/kg	50	86	09/20/95	BT

Remarks:

DL = Detection Limit

ND = Not Detected at the DL

Unless otherwise noted, all soil test results are calculated based on dry weight

Signed

C. H. McBride

LAW ENVIRONMENTAL NATIONAL LABORATORIES
TEST DATA REPORT

Date 09/21/95
Page 1

--- Project Information ---

Lab Number : 95-2406-06
Project No. : 13220-5-5053
Project Name : GEORGIA HFA

Cust. No. :

Manager: GERALD MUELLER

--- Sample Information ---

Station ID : SD-1
Matrix : SO
Type : GRAB
Collector : GRM

Sampled Date/Time : 09/08/95 11:30
Received Date/Time : 09/08/95 13:15
Received From/By : GM/JA
Chain of Custody : 32738
Number of Containers : 1

Parameter.....	Method....	Units	DL.....	Results...	Test Date	Anal;
-- INORGANIC CHEMISTRY RESULTS --						
Moisture (Oven Dried @ 105C)	D2216 M	%	1.0	14	09/20/95	RH
-- ORGANIC PREP RESULTS --						
Ext/Pest-SO/Son	3550/8080			N/A	09/19/95	SCC
Florisil Cleanup	EPA 3620			N/A	09/19/95	SCC
Sulfur Cleanup (with Copper)	EPA 3660			N/A	09/19/95	SCC
-- GC ORGANIC ANALYSIS (SO) RESULTS --						
btachlor	EPA 8080	ug/kg	5.0	ND	09/20/95	BT
ordane	EPA 8080	ug/kg	50	140	09/20/95	BT

Remarks:

DL = Detection Limit

ND = Not Detected at the DL

Unless otherwise noted, all soil test results are calculated based on dry weight.

Signed

C H McRae

95-34
3273

CHAIN OF CUSTODY RECORD

LAW ENVIRONMENTAL, INC.
NATIONAL LABORATORY
112 TOWNPARK DRIVE
KENNESAW, GEORGIA 30144
(404) 421-3389



SAMPLING INFORMATION
NAME OF FACILITY: Georgia HFA
STREET ADDRESS: 20 Lake Shore Dr.
CITY / STATE: Newman GA
ZIP: _____

PROJECT NAME <u>Georgia HFA</u>		JOB NO. <u>13220.5-5053</u>	TOTAL NO. OF CONTAINERS		CONTAINER TYPE G = GLASS PL = PLASTIC	DATE / TIME	RELINQUISHED BY: <u>A. Miller</u> (SIGNATURE)	DATE / TIME <u>9/8/95</u>	RECEIVED BY: <u>[Signature]</u> (SIGNATURE)	DATE <u>9/8/95</u>							
SAMPLERS (SIGNATURE) <u>A. Miller</u>		SAMPLERS INITIALS (PRINT) <u>GRM</u>															
SAMPLING DATE <u>9/8/95</u>	TIME	GRAB	COMP	MATRIX	SAMPLE STATION DESCRIPTION	40 ml G VOA Vial (HCl)	1 L G Amber Bottle	1 L PL Amber Bottle	1 L PL Bottle (HNO ₃)	1 L PL Bottle (H ₂ SO ₄)	1 L PL Bottle (Ascorbic Acid + NaOH)	250 ml PL Bottle	32 oz G Jar	8 oz G Jar	4 oz G Jar	2 oz G SEPTA Jar	FOR US
	9:30	✓	✓	S	SS-1												95-240
	9:45	✓	✓	S	SS-2												
	10:00	✓	✓	S	SS-3												
	10:30	✓	✓	S	SS-4												
	11:00	✓	✓	S	SS-5												
	11:30	✓	✓	S	SD-1												

DISTRIBUTION: ORIGINAL AND YELLOW COPIES ACCOMPANY SAMPLE SHIPMENT TO LABORATORY.
PINK COPY RETAINED BY SAMPLERS. YELLOW COPY RETAINED BY LABORATORY.

REMARKS
WATER W
SOIL SEDIMENT SO
OTHER TRA

Georgia Department of Natural Resources

205 Butler Street, SE, Suite 1462, Atlanta, Georgia 30334

Lonice C. Barrett, Commissioner
Environmental Protection Division

Harold F. Rehels, Director
404/657-8600

FILE COPY

July 3, 1996

Mr. Joseph Luttrell
Program Loan Administrator
Georgia Housing & Finance Authority
60 Executive Park South, Suite 250
Atlanta, Georgia 30329

RE: HSI # 10031
Property of Georgia Housing & Finance Authority
20 Lake Shore Drive, Newnan, Georgia

Dear Mr. Luttrell:

In 1994, the Environmental Protection Division (EPD) evaluated the above referenced site to determine whether a release exceeding a reportable quantity had occurred. Based upon the information available to EPD at the time this evaluation was done, specifically your notification dated March 22, 1994, it was determined that a release exceeding a reportable quantity had occurred at this site. Therefore, the site was listed on the Hazardous Site Inventory (HSI) on June 29, 1994.

In EPD's initial review of the site, there were areas around the residential structure, specifically the wooden deck and soils beneath it, believed to be contaminated sufficiently to constitute a notifiable release. The notification indicated this was an area where the pesticide, chlordane, was applied in a manner contrary to its labeling. Although removal of the wooden deck and some soils beneath it were reported to have been completed in 1988 prior to the site's listing, sampling of the remaining soil was not conducted and EPD was unable to determine conclusively that a notifiable condition did not exist. Consequently, the notification was scored and the site was then listed on the HSI as noted previously.

After reviewing Law Engineering and Environmental Services, Inc.'s letter dated June 5, 1996, EPD has reason to believe that the original release was not subject to the release notification requirements at Section 391-3-19-.04 of the Rules for Hazardous Site Response at the time of the site's listing on the HSI. The concentrations of chlordane detected in soil immediately adjacent to the foundation walls (16-36 mg/kg), although greater than the notification concentration of 9.2 mg/kg, are commensurate with residual levels expected from the application of this termiticide in a manner consistent with its labeling. Therefore, the presence of the termiticide in the foundation wall soils is a release which "consists solely of the use of said pesticide in a manner consistent with its label or labeling" and is consequently excluded from release notification due to Rule 391-3-19-.04(2)(f). Currently, concentrations of chlordane in soils beneath the former deck area are considerably lower (maximum of 0.230 mg/kg) than those in foundation wall soils. Given chlordane's half-life in the environment, the concentrations in the deck area soils that existed at the time of the site's listing were most likely over an order of magnitude less than the notification concentration. Therefore, EPD concurs that the release of chlordane to the soils beneath the deck does not meet the criterion for notification at Rule 391-3-19-.04(3)(b). The same conclusions can be supported for heptachlor, a substance which is associated with the chlordane.

Mr. Joseph Luttrell
July 3, 1996
Page 2

In conclusion, the release at the site did not exceed a reportable quantity at the time of listing on the HSI; consequently, the site shall be removed from the HSI pursuant to Rule 391-3-19-.05(4)(a).

Attached to this letter is a summary for the site of information stored in the HSI database, which has been revised to reflect this most recent determination. You will notice that the site's pathway scores using the Reportable Quantities Screening Method no longer exceed the threshold score of 10 for the groundwater pathway, or 20 for the on-site pathway. Our determination that a reportable quantity had not been released immediately follows from these subthreshold scores. Because neither a reportable quantity was exceeded nor has the Director determined that the site posed a danger to human health or the environment at the time of listing on the HSI, the site is hereby removed from the HSI as of the date of this letter. In the July 1997 publication of the HSI, the site will be listed under "Sites Removed From the HSI"; thereafter, subsequent publications of the HSI will not mention your site.

EPD is not required to provide notice to the public of the removal of a site from the HSI when that removal is made pursuant to Rule 391-3-19-.05(4)(a). If you wish to provide such notice, you are not restrained from doing so by the Hazardous Site Response Act, or Rules promulgated pursuant thereto. However, if the language of your planned public notice includes interpretation of the site removal that implies that EPD would concur with that interpretation, I would ask that you allow EPD the opportunity to review and comment on such language prior to publication.

If you have any questions, please call David Brownlee of EPD's Hazardous Sites Response Program at (404) 657-8600.

Sincerely,



Jennifer R. Kaduck

Chief

Hazardous Waste Management Branch

c: David E. Pauls

File: HSI 10031

R:\DAVID\LETTERS\LUTTRELL01

Site No.: 10031

Site Name: Property of Georgia Housing & Finance Authority

06/25/96

12:52:32

Location: 20 Lake Shore Drive

Newnan

Lat 33 ° 24 ' 21 " N

Lon 84 ° 49 ' 3 " W

County:

Coweta

30263

Property Owner:

Georgia Housing & Finance Authority

60 Executive Park South, Suite 250

Atlanta, GA 30329

Phone: (404) 679-4840

Contact Person:

Joseph Z. Luttrell

Program Loan Adm

Georgia Housing & Finance Authority

60 Executive Park South, Suite 250

Atlanta, GA 30329

Phone: (404) 679-4840

Facility ow/op:

N/A

Phone:

EPA ID:

Entered HSI Database on : 04/27/94

Corrective Action Site Class: 2

OUTPUT FROM REPORTABLE QUANTITIES SCREENING METHOD

GROUNDWATER PATHWAY Pathway Score: 0.00

A. Known (45), Suspected (10), or Pot. Future (5): 0

1B. Higher (6), Average (3), or Lower (0) Susceptibility: 0

2B. Physical State [stable solid=0; liquid=3]: 0

C. Containment [very good=0; poor=3]: 0

SUBSTANCE: (CAS: 57749) Chlordane

2D. Toxicity: 0 3D. Quantity: 0 - N/A - No Release

1E. Exposure: 0 (If 1E>4 then 2E=16)

2E. Distance to well or spring: 0 (If 1E=0 then 2E=1)

ON-SITE EXPOSURE PATHWAY Pathway Score: 0.00

A. Access [none=0; unlimited=4]: 4

B. Known (25), suspected (15), or no known (0) release: 0

C. Quality of containment [very good=0; poor=5]: 2

SUBSTANCE: (CAS: 57749) Chlordane

2D. Toxicity: 16 3D. Quantity: 1 - due to origin of contaminants, believe quantity to be very small

1E. Distance to resident [<300'=8; >1mile=1]: 8

2E. Sensitive Environment affected [yes=1]: 0

OTHER SUBSTANCES:

Gmdwat Soil Substance

y Heptachlor

Georgia Department of Natural Resources

205 Butler Street, SE, Suite 1462, Atlanta, Georgia 30334

Lonice C. Barrett, Commissioner
Environmental Protection Division

Harold F. Reheis, Director
404/657-8600

FILE COPY

August 28, 1996

Mr. Joseph Luttrell
Program Loan Administrator
Georgia Housing & Finance Authority
60 Executive Park South, Suite 250
Atlanta, Georgia 30329

RE: HSI # 10031
Property of Georgia Housing & Finance Authority
20 Lake Shore Drive, Newnan, Georgia

Dear Mr. Luttrell:

As indicated in our delisting letter of July 3, 1996, we have asked to be allowed to review and comment on the language of any proposed publication or statement regarding the delisting of this site. To that end, we have received your correspondence dated August 1, 1996 that includes the draft of the disclosure statement you intend to attach to future transactions regarding the site. After reviewing the statement, we concur with the appropriateness of the statement and have no further comments or exceptions to add to it. Thank you for your cooperation in this matter.

If you have any questions, please call David Brownlee of EPD's Hazardous Sites Response Program at (404) 657-8600.

Sincerely,



Tim Cash
Program Manager
Hazardous Site Response Program

c: David E. Pauls

File: HSI 10031

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GEORGIA HOUSING & FINANCE AUTHORITY

Programs Administered by The Georgia Department of Community Affairs

Jim Higdon
EXECUTIVE DIRECTOR

Zell Miller
GOVERNOR

August 1, 1996

Jennifer R. Kaduck
Chief
Hazardous Waste Management Branch
Georgia Department of Natural Resources
205 Butler Street, SE
Suite 1462
Atlanta, Georgia 30334

Subject:: HSI #10031
Site: 20 Lake Shore Dr., Newnan, GA

Dear Ms. Kaduck:

Enclosed is a draft of our proposed disclosure statement for the subject property. This statement will be attached as an addendum to the listing agreement, sales contract and, upon eventual transfer of the property, will be recorded along with the conveyance deed. We would like for your office to review and comment on the disclosure statement beforehand.

Please call me at (404) 679-0654 if you have any questions.

Respectfully,

J. Z. Luttrell, Loan Administrator

c: David Pauls/LAW

**NOTICE TO PROSPECTIVE PURCHASERS
OF UNIMPROVED PROPERTY LOCATED AT
20 LAKESHORE DRIVE, NEWNAN, GEORGIA
PRESENTLY OWNED BY THE
GEORGIA HOUSING AND FINANCE AUTHORITY**

The Georgia Housing and Finance Authority (GHFA) obtained title to the above property through foreclosure. In early 1994, GHFA had reason to believe that the property may have been contaminated by an overapplication of pesticide for the control of termites, more specifically chlordane and heptachlor. On March 22, 1994, GHFA submitted the property to the Environmental Protection Division, Department of Natural Resources, pursuant to the Georgia Hazardous Site Response Act and EPD Rule 391-3-19-.04. While the wooden deck and surrounding soil where the overapplication had occurred had been removed from the property prior to GHFA obtaining title, no new testing had been done. Accordingly, on June 29, 1994, the property was listed on the Hazardous Site Inventory as HSI #10031.

In May, 1996, because the property had been vacant for several years and remediation and repair costs to the structure were not economically feasible, the house was demolished, removed from the property, and the site regraded. New samples of the soils on the site were thoroughly tested and the results submitted to EPD in June, 1996. GHFA requested the property be removed from the Hazardous Site Listing since the evidence indicated that at the time of the listing, the property may not have contained chlordane or heptachlor in reportable quantities.

On July 3, 1996, EPD removed the property from the Hazardous Site Inventory, and stated in part as follows:

"Therefore, EPD concurs that the release of chlordane to the soil beneath the deck does not meet the criteria for notification at Rule 391-3-19-.4(3)(b)....

"Because neither a reportable quantity was exceeded nor has the Director determined that the site posed a danger to human health or the environment at the time of listing on the HSI, the site is hereby removed from the HSI as of the date of this letter."

The complete file regarding this property is available for inspection at the office of the Environmental Protection Division in Atlanta, Georgia.

Georgia Department of Natural Resources

205 Butler St. S.E., Floyd Towers, East, Suite 1462, Atlanta, Georgia 30334

FILE COPY

Lonice C. Barrett, Commissioner
Environmental Protection Division
Harold F. Reheis, Director
Hazardous Waste Management Branch
404/657-8600

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

September 6, 1996

Deborah P. Glover
Clerk of Superior Court
P.O. Box 943
Newman, Georgia 30264-0943

RE: Removal of Site from Hazardous Site Inventory
Georgia Housing & Finance Authority - HSI # 10031

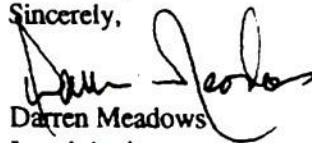
Dear Ms. Glover;

On July 1, 1996, the Georgia Environmental Protection Division (EPD) published the third edition of the Georgia Hazardous Site Inventory (HSI). Pursuant to O.C.G.A 12-8-97(a), EPD sent you a copy of the HSI for filing in the room where deed records are kept. The purpose of this correspondence is to update that July 1, 1996 edition of the HSI.

You will find one or more documents attached to this correspondence. These documents are summary sheets for sites EPD has removed from the HSI since July 1, 1996 and which lie within your county. **Please insert this letter and the attachments in the section labeled "UPDATES" in your copy of the HSI.** If you have multiple HSI booklets, please photocopy this correspondence and attach a copy to each HSI.

If there are any questions, or if you do not have a copy of the July 1, 1996 Hazardous Site Inventory, please call me at (404)657-8600.

Sincerely,



Darren Meadows
Legal Assistant
Hazardous Sites Response Program

att: Site summary sheet

file: HSI # 10031

SITE SUMMARY

HSI # 10031 - Property of Georgia Housing & Finance Authority

The reportable release at the site, an abandoned residence in Newnan, consisted of chlordane contamination in the foundation, soils, and interior. The Authority has information indicating that Ryder Pest Control Company treated the premises for termites from approximately March 1986 to 1988 using chlordane and possibly heptachlor as a termiticide. The owner of the residence at the time alleged that excessive amounts of the termiticide had been used in areas not proper for the application of termiticide. In May 1988, some remediation was performed, including soil removal and replacement of a wooden deck behind the house. The owner subsequently abandoned the property and GHFA acquired the property through foreclosure. Sampling at the site in 1991 indicated that chlordane contamination remained although the areas of inappropriate application were not resampled. GHFA submitted a HSRA notification in March 1994 and the site was listed on June 29, 1994.

Subsequent sampling conducted by LAW Engineering for GHFA revealed that contamination was actually below the NC levels for chlordane and heptachlor in the inappropriate application areas at the time of listing. Therefore, the site was delisted on July 3, 1996 pursuant to Rule § 391-3-19-.05(4)(a). The areas with levels of chlordane above the NC level meet the criteria of Rule § 391-3-19-.04(2)(f) and therefore is not subject to reporting requirements.

Appendix F

Georgia Department of Natural Resources

205 Butler Street, S.E., Suite 1252, Atlanta, Georgia 30334

Joe D. Tanner, Commissioner
Harold F. Reheis, Director
Environmental Protection Division

RECORD OF TELEPHONIC CONVERSATION

Routing: _____

Date: 9/22/97
Time: 1:17 p.m.

File: GHFA (Newnan)

Party Spoken To: Mr. David Sibley
Agency/Company: Newnan Water & Light
Address: 70 Sewell Road
Telephone Number: (770) 253-5516

Title: Watershed Superintendent
City: Newnan
State/Zip: GA 30263

Subject(File Name): Property of Georgia Housing & Finance Authority
20 Lake Shore Drive

Summary of Call:

Mr. Sibley informed me that there are (3) surface water intakes for the City of Newnan. These intakes are located on: White Oak Creek, Sandy Creek and Line Creek. The Newnan Water & Light removes approximately 2~3 million gallons per day from the White Oak Creek surface water intake point located near Big Poplar Road. The other intakes are used only in the winter months. The Newnan Waterworks Lakes south of the City of Newnan are used to store water.

Action Required: None

Follow-up Responses/Additional Comments: _____

Signature: James D. Skirvin

Date: 9/22/97

(0918R)

Georgia Department of Natural Resources

205 Butler Street, S.E., Suite 1252, Atlanta, Georgia 30334

Joe D. Tanner, Commissioner
Harold F. Reheis, Director
Environmental Protection Division

RECORD OF TELEPHONIC CONVERSATION

Routing: _____

Date: 9/22/97
Time: 2:30 pm.

File: GHFA (Newnan)

Party Spoken To: Mr. Dudley Buchanan
Agency/Company: Newnan Water & Light
Address: P.O. Box 578
Telephone Number: (770) 251-0994

Title: Water Resource Manager
City: Newnan
State/Zip: GA 30264

Subject(File Name): Property of Georgia Housing & Finance Authority
20 Lake Shore Drive

Summary of Call:

Mr. Buchanan informed me that there (3) surface water intakes for the City of Newnan. These intakes are located on: White Oak Creek near Big Popular Road, Sandy Creek near Corinth Road, and Line Creek near Highway 54 at the county line. He estimated that 75% of the population of Coweta County has access to city water. Small communities may be using private wells. The city of Newnan has a water discharge point on Wahoo Creek within the city limits. The average water flow at this point is 0.76 cfs. Coweta County owns the pumps and water lines, but Newnan Water & Light provides the water to the community. He did not know of any fisheries on the Snake Creek, Wahoo Creek, Little Wahoo Creek or ponds/lakes. The drainage flow area below water discharge point is 371 acres and above the water discharge point is 4,338 acres. This calculates to 0.4 cfs and 5.2 cfs, respectively. He also told me that the average water flow at the surface water intake on White Oak Creek is 0.80 cfs in a 21 sq. miles; 16.8 cfs.

Action Required: None

Follow-up Responses/Additional Comments: _____

Signature: James D. Shivers

Date: 9/22/97

(0918R)

Appendix G

SOIL SURVEY OF COWETA, HEARD, AND TROUP COUNTIES, GEORGIA

By Jule F. Brooks, Soil Conservation Service

Soils surveyed by Jule F. Brooks, Thomas N. Crabb,
and Robert D. Wells, Soil Conservation Service

U. S. Department of Agriculture, Soil Conservation Service,
in cooperation with the University of Georgia, College of Agriculture,
Agricultural Experiment Stations

COWETA, HEARD, AND TROUP COUNTIES are in the west-central part of Georgia (See opposite page). The survey covers a land area of 738,752 acres, or 1,154 square miles. Coweta County has 283,072 acres, or 442 square miles. Heard County has 190,080 acres, or 297 square miles. Troup County has 265,600 acres, or 415 square miles.

Coweta, Heard, and Troup Counties are in the Southern Piedmont Major Land Resource Area. Heard and Troup Counties and the western part of Coweta County are in the Chatahoochee River watershed. The Chatahoochee River is the northwestern boundary of Coweta County. It flows mostly southwesterly through Heard County into Lake West Point. This lake occupies most of the Chatahoochee River flood plain in extreme southern Heard County and in Troup County. From the lake, the Chatahoochee River flows south to Harris County. The eastern part of Coweta County is in the Flint River watershed. The eastern boundary of Coweta County is Line Creek.

The landscape consists of ridgetops and hillsides that are dissected by numerous drainageways. The survey area is characterized mostly by very gently sloping to sloping ridgetops on uplands. The hillsides near the major streams, however, are strongly sloping or steep. Narrow to wide, nearly level flood plains are throughout the survey area and are commonly adjacent to steep hillsides. Elevation of the uplands ranges from about 800 feet in the southern part of Coweta and Troup Counties to about 1,400 feet in the northwestern part of Heard County.

General nature of the counties

Ervin P. Rayfield, planning director, Chatahoochee-Flint Area Planning and Development Commission, assisted in preparing this section.

This section gives general information about the counties concerning their climate; organization, settlement, and population; industry; natural resources; and farming.

Climate

This subsection was prepared by the National Climatic Center, Asheville, North Carolina.

Coweta, Heard, and Troup Counties have long, hot summers because moist tropical air from the Gulf of Mexico persistently covers the area. Winters are cool and fairly short. They are interrupted only rarely by a cold wave, which moderates in 1 or 2 days. Precipitation is fairly heavy throughout the year, but reaches a slight peak in winter. Prolonged droughts are rare. Summer precipitation, mainly afternoon thundershowers, is adequate for all crops.

Table 1 gives data on temperature and precipitation for the survey area, as recorded at Newnan, Georgia, for the period 1951 to 1975. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

In winter the average temperature is 46 degrees F, and the average daily minimum is 35 degrees. The lowest temperature on record, minus 3 degrees, occurred at Newnan on January 24, 1963. In summer the average temperature is 78 degrees, and the average daily maximum is 89 degrees. The highest temperature, 104 degrees, was recorded on July 23, 1952.

Growing degree days, shown in Table 1, are equivalent to "heat units". (See footnote 1 of Table 1 for a definition of growing degree day.) Beginning in spring, growing degree days accumulate by the amount that the average daily temperature exceeds a base temperature (50 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

Of the total annual precipitation, 26 inches, or 50 percent, generally falls during April through September, which includes the growing season for most crops. In 2 years out of 10, the April to September rainfall is less than 22 inches. The heaviest 1-day rainfall during the period of record was 5.30 inches at Newnan on February 25, 1961.

TABLE 1.--TEMPERATURE AND PRECIPITATION DATA

Month	Temperature ¹						Precipitation ¹				
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have--		Average number of growing degree days ²	Average	2 years in 10 will have--		Average number of days with 0.10 inch or more	Average snowfa
				Maximum temperature higher than--	Minimum temperature lower than--			Less than--	More than--		
<u>F</u>	<u>F</u>	<u>F</u>	<u>F</u>	<u>F</u>	<u>Units</u>	<u>In</u>	<u>In</u>	<u>In</u>		<u>In</u>	
January----	55.3	33.9	44.7	74	8	61	5.19	3.25	6.94	9	.
February---	59.2	35.6	47.4	78	11	87	4.84	3.00	6.50	7	.
March-----	66.6	41.5	54.1	85	20	194	5.70	3.77	7.46	9	.
April-----	76.3	50.0	63.2	89	31	396	4.94	3.06	6.62	6	.
May-----	82.8	57.6	70.2	94	39	626	4.24	2.09	5.98	6	.
June-----	87.8	64.1	76.0	98	50	780	4.26	2.72	5.63	7	.
July-----	89.9	67.0	78.5	99	57	884	4.92	2.86	6.59	9	.
August-----	89.6	66.4	78.0	97	56	868	3.86	2.11	5.28	6	.
September--	84.4	61.7	73.1	96	46	693	3.30	1.57	4.71	5	.
October----	75.5	50.8	63.2	90	30	409	2.89	.67	4.66	4	.
November---	65.1	41.0	53.1	82	19	128	3.46	2.07	4.70	6	.
December---	57.0	35.6	46.3	76	11	71	4.78	2.50	6.65	7	.
Year-----	74.1	50.4	62.3	100	6	5,197	52.38	45.06	59.44	81	.

¹Recorded in the period 1951-75 at Newnan, Ga.

²A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50 F).

crack. The subsoil is red and extends to a depth of 36 inches. It is clay in the upper part and clay loam in the lower part. Below this, to a depth of 52 inches or more, is weathered mica schist.

This soil is low in both natural fertility and organic-matter content. It is strongly acid or very strongly acid throughout, except where the surface layer has been limed. Permeability is moderate, and available water capacity is medium. Tilth is poor because of erosion. Infiltration is slow, and surface runoff is rapid. The root zone is deep and easily penetrated by plant roots.

Included with this soil in mapping are a few small areas of severely eroded soils; several areas of Madison gravelly sandy loam; and a few small areas of Cecil, Louisa, and Pacolet soils. These areas make up 10 to 15 percent of this map unit.

This soil has poor potential for row crops and small grain. The potential for farming is limited by the slope, by the gullies, and by the severe hazard of erosion. This soil has fair potential for hay and pasture if management is good.

This soil has fair potential for loblolly pine and yellow-poplar. The hazard of erosion, equipment limitations, and seedling mortality are management concerns. These limitations can be overcome, to some extent, by good management.

This soil has fair potential for most urban uses. The low rate of percolation in the subsoil is a limitation for septic tank absorption fields. This limitation can be overcome by good design and careful installation. Slope is commonly a limitation for urban and recreational uses. This limitation generally can be overcome by careful design and construction or by modifying the slope. Low strength is a limitation for most community development. Capability subclass VIe; woodland suitability group 4c.

MuC—Madison-Urban land complex, 2 to 10 percent slopes. This very gently sloping and gently sloping complex consists of Madison soils and Urban land that are so intermingled they could not be separated at the scale used for mapping. The soils are on smooth ridgetops and hillsides of the Piedmont Upland. Individual areas range from 100 to 500 acres.

Madison soils make up about 60 percent of each mapped area. In a typical profile the surface layer is brown gravelly sandy loam about 5 inches thick. The subsoil is red and extends to a depth of 38 inches. It is sandy clay loam in the upper few inches, clay in the middle part, and clay loam in the lower part. Below this, to a depth of 52 inches or more, is weathered mica schist.

This soil is low in both natural fertility and organic-matter content. It is strongly acid or very strongly acid throughout. Permeability is moderate, and available water capacity is medium. Tilth is good. The root zone is deep and easily penetrated by plant roots.

Urban land makes up about 40 percent of each mapped area. The soils have been altered by cutting, filling, and shaping for community development. Most urban land is

used for shopping centers, schools, parking lots, industrial sites, streets, commercial buildings, and residences.

Included with this unit in mapping are idle areas of Madison sandy clay loam that is eroded. Most of these areas of eroded soils are dissected by shallow gullies. Also included are small areas of intermingled Cecil and Louisa soils.

This complex has high potential for most urban uses including gardens, shrubs, shade trees, and other kinds of vegetative cover common to the survey area. The slow rate of percolation is a limitation for septic tank absorption fields, but this limitation can commonly be overcome by good design and careful installation. The common plants used for landscaping and vegetable gardens grow well on these soils. The hazard of erosion is severe, however, prior to establishment of permanent cover. Tilling across the slope and establishing cover crops during the winter help control erosion on areas used for vegetable gardens. Capability subclass IIIe; woodland suitability group 3c.

MuE—Madison-Urban land complex, 10 to 25 percent slopes. This sloping and moderately steep complex consists of Madison soils and Urban land that are so intermingled they could not be separated at the scale used for mapping. It is on hillsides of the Piedmont Upland. Some areas contain rills and galled spots, shallow gullies, and an occasional deep gully. Individual areas range from 10 to 75 acres.

Madison soils make up about 75 percent of each mapped area. In a typical profile the surface layer is reddish brown gravelly sandy clay loam about 5 inches thick. The subsoil is red and extends to a depth of about 36 inches. It is clay in the upper part and clay loam in the lower part. Below this, to a depth of 52 inches or more, is weathered mica schist.

This soil is low in both natural fertility and organic-matter content. It is strongly acid or very strongly acid throughout. Permeability is moderate, and available water capacity is medium. Tilth is poor because of erosion. Infiltration is slow, and surface runoff is rapid. The root zone is deep and easily penetrated by plant roots.

Urban land makes up about 25 percent of each mapped area. The soils have been altered by cutting, filling, and shaping for residences and streets.

Included with this unit in mapping are areas of Madison sandy loam and small areas of intermingled Cecil and Louisa soils.

This complex has poor potential for most urban and recreational uses because of slope. Also, the slow rate of percolation in the subsoil is a limitation for septic tank absorption fields. In places, these limitations can be overcome, to some extent, by careful design and construction, or by modifying the slope. The hazard of erosion is severe prior to establishment of permanent cover. Tilling across the slope and establishing cover crops during the winter help control erosion on areas used for vegetable gardens. Capability subclass VIe; woodland suitability group 3r.



Table 9.—Record of wells in the Greater Atlanta Region--Continued

Well No.	Owner	Water-bearing unit	Latitude and longitude	Yield (gal/min)	Depth (ft)	Casing		Date drilled	Driller	Elevation (ft)	Water level below land surface	
						depth (ft)	diam. (in.)				Static head (ft)	Pumping head (ft)
Coweta County												
6AA1	(b)(6) Personal Powers Crossroads	B	33°20'18" 84°58'47"	45	161	64	6	11/57	Virginia	840	20	30
6AA2	(b)(6) Personal Rte. 2 (for (b)(6) Personal Newnan	B	33°19'44" 84°55'12"	100	90	23	6	1977	Adams- Massey	780	--	--
6BB1	(b)(6) Personal Rte. 1, Box 1825 Coggin Rd. Newnan	B	33°24'09" 84°56'28"	30	105	35	6	3/69	Virginia	860	5	20
6BB2	(b)(6) Personal Rte. 1, Box 2270 Welcome Rd. Newnan	B	33°23'08" 84°53'33"	50	145	69	6	10/75	Virginia	840	30	145
6BB3	Western High School Welcome Community Welcome	A	33°23'23" 84°53'20"	18	231	116	6	3/50	do.	870	40	100
6BB5	(b)(6) Personal Rte. 1, Box 1995 Mt. Carmel Rd. Handy	A	33°24'38" 84°53'28"	50	120	40	6	12/77	do.	840	8	120
6BB6	(b)(6) Personal Murphy Rd. Newnan	B,A	33°25'21" 84°54'19"	25	205	--	--	9/77	Waller	780	--	--
6BB7	(b)(6) Personal Welcome-Sargent Rd. Newnan	A	33°24'43" 84°53'19"	30	205	--	--	1/64	Virginia	770	15	140
6BB8	Georgia Power Co. Yates Plant Newnan	G	33°27'57" 84°54'24"	50+	378	34	--	5/71	Weisner	780	--	--
6BB9	do.	G	33°27'43" 84°53'59"	115	307	43	--	9/65	Virginia	740	--	--
6BB10	do.	B,G	33°27'40" 84°53'41"	100	146	42	--	5/71	do.	760	--	--
7AA1	(b)(6) Personal Rte. 4, Box 05 Beavers Rd. Newnan	A	33°16'52" 84°50'53"	60	490	50	6	9/67	Weisner	860	--	--
7AA2	Moreland School Moreland	A	33°17'00" 84°46'06"	55	228	83	--	10/41	Virginia	940	--	--
7AA3	do.	A	33°17'03" 84°46'06"	40	458	66	6	6/67	do.	940	40	210
7AA4	Westside School Newnan	A	33°22'27" 84°49'48"	65	302	113	6	11/54	do.	860	30	80
7AA5	(b)(6) Personal Belt Rd. Newnan	A	33°22'12" 84°49'37"	50	136	19	6	6/58	do.	880	--	--
7AA7	Unity Baptist Church LaGrange St. Ext. Newnan	A	33°21'34" 84°49'34"	25	155	46	6	1963	do.	900	--	--

Table 9.—Record of wells in the Greater Atlanta Region—Continued

Well No.	Owner	Water-bearing unit	Latitude and longitude	Yield (gal/min)	Depth (ft)	Casing		Date drilled	Driller	Elevation (ft)	Water level below land surface	
						depth (ft)	diam. (in.)				Static head (ft)	Pumping head (ft)
Coweta County												
7AA8	City of Newnan Newnan Waterworks Newnan	A	33°21'16" 84°48'52"	90	400	—	—	1910	Hughes Spec. Well Orig. Co.	810	—	—
7AA9	do.	A	33°21'16" 84°48'48"	75	500	—	—	1941	Hughes	810	—	—
7AA10	do.	A	33°21'09" 84°48'47"	100	350	—	—	1914	do.	850	—	—
7AA11	do.	A	33°21'08" 84°48'43"	100	350	—	—	1914	do.	880	—	—
7AA12	(b)(6) Personal 128 Woodbine Cir. Newnan	A	33°21'43" 84°48'12"	50	450	98	6	6/57	Virginia	950	10	30
7AA13	Coweta County Airport Newnan	A	33°18'46" 84°46'24"	35	205	77	6	1/66	do.	940	40	185
7AA14	Airport Spur Service I-85 & U.S. 29 Newnan	A	33°19'07" 84°46'39"	75	370	94	6	7/72	do.	960	—	—
7AA15	Standard Oil Station I-85 & U.S. 29 Newnan	A	33°19'33" 84°46'44"	50	248	69	6	2/72	do.	980	30	248
7AA16	Holiday Inn I-85 & U.S. 29 Newnan	A	33°19'41" 84°46'48"	100+	223	68	6	12/68	Weisner	970	—	—
7AA17	(b)(6) Personal Banks Haven, Hwy. 29 Newnan	A	33°20'36" 84°47'03"	50	435	95	6	7/69	Virginia	930	22	210
7AA18	E. Newnan Water Co. Newnan	A	33°21'08" 84°46'53"	24	510	78	6	9/73	do.	960	—	—
7AA19	E. Newnan School Newnan	A	33°21'17" 84°46'40"	21	401	78	6	10/54	do.	920	35	160
7AA20	(b)(6) Personal Privacy 31 Sunrise Dr. Newnan	A	33°21'26" 84°46'04"	75	140	30	6	6/74	do.	950	—	—
7AA21	McDowell Brothers Pinehill Estates, 2 Newnan	A	33°21'47" 84°50'19"	60	217	65	—	1975	Adams- Massey	820	—	—
7AA22	do., 1	A	33°21'52" 84°50'10"	20	247	78	—	1974	do.	800	—	—
7BB1	(b)(6) Personal Rte. 1, Box 266U Highway 34, South Newnan	A	33°22'42" 84°52'14"	40	120	27	6	1/78	Virginia	810	—	—
7BB2	(b)(6) Personal 16 Beech St. Newnan	A	33°23'17" 84°49'45"	150	255	65	6	12/73	do.	940	—	—
7BB3	(b)(6) Personal 11 Beech St. Newnan	A	33°23'19" 84°49'41"	50	320	70	6	6/77	do.	890	—	—

Table 9.—Record of wells in the Greater Atlanta Region—Continued

Well No.	Owner	Water-bearing unit	Latitude and longitude	Yield (gal/min)	Depth (ft)	Casing		Date drilled	Driller	Elevation (ft)	Water level below land surface	
						depth (ft)	diam. (in.)				Static head (ft)	Pumping head (ft)
Coweta County												
7BB5	(b)(6) Personal Sargent	B	33°25'12" 84°51'21"	53	405	82	—	6/44	Virginia	820	—	—
7BB6	do.	B	33°25'01" 84°51'17"	69	675	—	—	1953	do.	840	—	—
7BB7	Arneo Mills Highway 27, North Newnan	A	33°26'02" 84°52'08"	40	360	—	—	1927	do.	760	—	—
7BB8	do.	A	33°26'03" 84°52'07"	50	400	—	—	1932	do.	760	—	—
7BB9	do.	A	33°26'02" 84°52'03"	65	586	—	—	1940	do.	755	—	—
7BB10	do.	A	33°25'53" 84°52'05"	33	300	107	6	12/54	do.	760	40	146
7BB11	(b)(6) Personal Box 185D, Brown Place Newnan	A	33°24'58" 84°48'54"	100	212	30	6	5/74	do.	830	—	—
7BB12	Windsor Estates (Lindsey Realty) Laurel Dr. Newnan	A	33°25'44" 84°49'07"	40	323	—	—	11/77	Waller	915	—	—
7BB13	(b)(6) Personal Country Club Rd. Newnan	A	33°25'44" 84°48'54"	75	390	—	—	9/77	do.	900	—	—
7BB14	Northside School Country Club Rd. Newnan	A	33°25'23" 84°47'47"	36	288	44	—	9/51	Virginia	920	55	73
7BB15	BPOE Club (Elks) Atlanta Hwy. (Hwy. 29) Newnan	A	33°23'51" 84°47'49"	124	265	72	6	6/59	do.	920	30	200
7BB16	Newnan House Motel & Restaurant Highway 29 Newnan	A	33°24'08" 84°47'30"	80	270	71	6	11/75	do.	900	50	210
7BB17	City of Newnan Wahoo Creek Sewage Treatment Plant Highway 29 Newnan	A	33°24'11" 84°47'04"	63	371	28	6	12/74	do.	840	70	162
7BB18	(b)(6) Personal 4 Redbud Trail Newnan	A	33°24'28" 84°46'51"	50	225	78	6	11/74	do.	880	—	—
7BB19	(b)(6) Personal 5 Redbud Trail Newnan	A	33°24'25" 84°46'51"	30	205	64	6	3/76	do.	860	—	—
7BB20	(b)(6) Personal Lakehills Subdiv. 1 Dogwood Dr. Newnan	A	33°24'33" 84°46'42"	30	265	69	6	11/72	do.	880	—	—

Table 9.—Record of wells in the Greater Atlanta Region—Continued

Well No.	Owner	Water-bearing unit	Latitude and longitude	Yield (gal/min)	Depth (ft)	Casing		Date drilled	Driller	Elevation (ft)	Water level below land surface	
						depth (ft)	diam. (in.)				Static head (ft)	Pumping head (ft)
Coweta County												
7BB21	(b)(6) Personal Lakehills Subdiv. 1 Dogwood Dr. Newman		33°24'34" 84°46'40"	20	220	96	6	3/63	Virginia	875	—	—
7BB22	do. (b)(6) Personal	A	33°24'37" 84°46'45"	20	220	53	6	4/63	do.	910	—	—
7BB24	Newnan County Club Highway 29 Newnan	E,A	33°25'09" 84°46'36"	60	500	124	6	10/48	do.	850	—	—
7BB25	(b)(6) Personal Rainwater Antiques Highway 29 Newnan	B	33°25'37" 84°45'38"	33	206	101	6	12/69	do.	940	—	—
7BB26	(b)(6) Personal Rte. 2, Walt Carmichael Rd. Newnan	A	33°28'38" 84°50'23"	32	304	6	6	10/65	do.	770	—	—
7BB27	(b)(6) Personal Box 44, Roscoe Rd. Sargent	A	33°27'16" 84°49'19"	37	192	44	6	5/58	do.	900	57	109
7BB30	(b)(6) Personal Rte. 2, Happy Valley Rd. Newnan (at residence)	A	33°27'52" 84°45'24"	51	200	56	6	6/58	do.	900	—	—
7BB31	Madras School Highway 29, North Madras	A	33°26'07" 84°45'02"	34	295	75	6	10/65	do.	1,000	20	205
7BB32	Heritage Hills Subdiv. Highway 29, North Newnan	A	33°25'10" 84°46'26"	50	391	78	6	11/72	do.	960	90	391
7BB33	(b)(6) Personal 11 Thomas Way Newnan	A	33°23'04" 84°29'56"	50	152	97	—	1974	Adams- Massey	880	—	—
7BB34	Dixie Hill Enterprises McDowell Brothers Wedgewood Subdiv., 2 Newnan	A	33°23'16" 84°49'58"	50	—	—	—	1977	do.	960	—	—
7BB35	do., 1	A	33°23'17" 84°50'10"	150	187	31	—	1977	do.	840	—	—
7BB36	(b)(6) Personal 132 Temple Ave. Newnan	A	33°23'17" 84°49'46"	100	230	71	—	1972	do.	920	—	—
7BB37	William L. Bonnell Co. Subdivision, 4 Newnan	A	33°22'58" 84°49'08"	75	201	30	—	1958	do.	920	—	—
7BB38	William L. Bonnell Co. Newnan, 5	A	33°23'00" 84°49'07"	54	300	58.5	—	1958	do.	920	—	—
7BB39	(b)(6) Personal Newnan	A	33°23'43" 84°48'02"	29	350	83.5	—	1958	do.	960	—	—

Table 9.—Record of wells in the Greater Atlanta Region--Continued

Well No.	Owner	Water-bearing unit	Latitude and longitude	Yield (gal/min)	Depth (ft)	Casing		Date drilled	Driller	Elevation (ft)	Water level below land surface	
						depth (ft)	diam. (in.)				Static head (ft)	Pumping head (ft)
Coweta County												
7BB40	Layton Brozell Construction Co. Skating Rink Newnan	A	33°24'01" 84°47'35"	25	260	65	—	1926	Adams-Massey	900	—	—
7BB42	Hickory Hollow Subdiv. (McDowell Bros.), 2	D	33°26'14" 84°50'15"	87	330	52	—	1976	—	900	—	—
7CC2	(b)(6) Personal Rte. 2, Box 162 Starr Rd. Roscoe	B	33°30'07" 84°48'13"	35	159	57	6	10/77	Virginia	850	35	159
7Z1	City of Grantville Grantville	A	33°14'06" 84°50'12"	50	500	—	8	—	—	860	—	—
7Z2	do.	A	33°14'02" 84°50'13"	80	600	57	8	7/56	Virginia	850	—	—
7Z3	do.	A	33°13'59" 84°50'23"	50	550	—	—	—	—	880	—	—
7Z4	do.	A	33°14'16" 84°50'00"	85	500	—	8	—	—	880	—	—
7Z5	do.	A	33°14'09" 84°49'55"	27	650	47	8	7/62	Virginia	880	—	—
7Z8	Grantville Mills Grantville	A	33°14'18" 84°49'54"	27	700	—	—	1933	—	840	—	—
8AA1	(b)(6) Personal Hwy. 54 & Haynie Rd. Moreland	A	33°16'19" 84°42'49"	120	127	87	6	9/71	Weisner	880	—	—
8AA2	(b)(6) Personal Elders Mill Rd. Blackjack	A	33°15'49" 84°38'09"	80	200	33	6	1978	Askew-Morris	875	—	—
8AA3	(b)(6) Personal Elders Mill Rd. Senoia	A	33°15'29" 84°37'39"	42	501	22	6	2/56	Virginia	860	—	—
8AA4	(b)(6) Personal Hinds Rd. Newnan	A	33°18'17" 84°42'45"	20	105	—	6	1/75	Waller	840	—	—
8AA5	(b)(6) Personal Moore Rd. Raymond	A	33°19'16" 84°42'48"	60	357	56	6	9/76	Virginia	845	20	350
8AA6	(b)(6) Personal Scoggin Rd. Raymond	A	33°19'19" 84°42'53"	50	138	—	6	—	Hale	835	—	—
8AA7	(b)(6) Personal Rte. 3, Box 83C Raymond Highway Newnan	A	33°20'08" 84°44'28"	48	100	53	6	1/66	Virginia	880	40	50
8AA8	(b)(6) Personal Rte. 3, Box 135 Highway 16 Newnan	A	33°20'12" 84°44'17"	30	140	41	6	4/65	do.	880	27	100

Table 9.—Record of wells in the Greater Atlanta Region—Continued

Well No.	Owner	Water-bearing unit	Latitude and longitude	Yield (gal/min)	Depth (ft)	Casing		Date drilled	Driller	Elevation (ft)	Water level below land surface	
						depth (ft)	diam. (in.)				Static head (ft)	Pumping head (ft)
Coweta County												
8AA9	City of Turin Turin	A	33°19'51" 84°38'41"	20	484	80	—	3/72	Waller	920	35	—
8AA10	Town of Turin P. O. Box 35 Turin	A	33°19'26" 84°38'00"	200	352	85	—	1976	Adams-Massey	900	—	—
8AA11	(b)(6) Personal Hope Ranch, Odum Rd. Turin	H	33°19'48" 84°37'41"	50	305	—	—	9/77	Waller	900	—	—
8BB1	(b)(6) Personal Lower Fayetteville Rd. Newnan	B	33°22'38" 84°43'50"	20	123	45	6	10/76	Weisner	845	—	—
8BB2	(b)(6) Personal Rte. 4, Box 273 Posey Rd. Newnan	B	33°25'51" 84°42'13"	60	190	87	6	5/74	Virginia	910	—	—
8BB3	(b)(6) Personal Lower Fayetteville Rd. Newnan	B	33°22'50" 84°40'15"	36	270	20	6	5/59	do.	920	25	50
8BB4	(b)(6) Personal Lassetter Rd. Sharpsburg	A	33°23'37" 84°39'31"	60	125	88	6	10/72	do.	885	—	—
8BB5	(b)(6) Personal Rte. 1, Shoal Creek Rd. Sharpsburg	A	33°24'01" 84°38'37"	40	144	—	—	11/73	Waller	840	—	—
8BB6	(b)(6) Personal Rte. 1, Box 34 Sharpsburg (now Sarvich)	A	33°24'02" 84°37'57"	50	165	58	6	6/77	Virginia	810	—	—
8BB7	(b)(6) Personal Highway 54 Sharpsburg	B	33°23'00" 84°37'30"	150+	370	8	6	5/78	do.	800	—	—
8BB8	(b)(6) Personal Highway 54 Sharpsburg	B	33°22'59" 84°37'31"	25	85	31	6	8/75	do.	870	—	—
8BB10	(b)(6) Personal Riggins Rd. (Hidley Rd.) Palmetto	F	33°29'51" 84°40'47"	50	77	38	6	11/54	do.	1,040	—	—
8BB11	(b)(6) Personal Motel on Hwy. 295 Palmetto	F	33°29'38" 84°40'30"	57	340	52	6	4/57	do.	1,040	—	—
8BB12	(b)(6) Personal Palmetto-Fisher Rd. Palmetto	F	33°28'09" 84°39'54"	35	170	65	6	5/56	do.	980	—	—
8BB13	Cannon Gate Golf Course Palmetto	F	33°28'15" 84°39'32"	33	422	53	—	9/65	Weisner	960	—	—
8BB14	(b)(6) Personal Rte. 2, Box 296 Fisher Rd. Major	F	33°27'35" 84°39'36"	25	245	49	—	1978	Askew-Morris	960	—	—

Table 9.—Record of wells in the Greater Atlanta Region--Continued

Well No.	Owner	Water-bearing unit	Latitude and longitude	Yield (gal/min)	Depth (ft)	Casing		Date drilled	Driller	Elevation (ft)	Water level below land surface	
						depth (ft)	diam. (in.)				Static head (ft)	Pumping head (ft)
Coweta County												
8BB15	Canon Gate Community Rte. 1 Sharpsburg	F	33°27'06" 84°38'52"	80	198	60	—	10/70	Weisner	930	—	—
8BB16	Staton Constr. Co. 169 N. Woods Rd. Woods Crossing Sharpsburg	A,B	33°27'02" 84°37'50"	30	285	43	—	6/78	Askew-Morris	900	—	—
8CC4	(b)(6) Personal Box P Palmetto	A,F	33°30'09" 84°40'10"	150	125	33	6	8/65	Virginia	1,020	—	—
8CC5	(b)(6) Personal R.F.D. 2, Johnson Cir. Palmetto	A,F	33°30'12" 84°40'09"	30	226	14	6	3/73	do.	1,030	—	—
8CC9	(b)(6) Personal Mobile Home Ranch I-85 at Palmetto Exit	F	33°30'20" 84°38'11"	23	406	92	6	4/71	do.	900	—	—
9Z1	(b)(6) Personal Highway 85, South Haralson	F	33°11'57" 84°34'44"	32	200	78	6	6/60	do.	770	10	80
9Z2	(b)(6) Personal Highway 85, South Haralson	F	33°12'19" 84°34'52"	36	191	106	6	2/56	do.	780	—	—
9Z3	(b)(6) Personal Dun Kavin Acres Highway 85, South Haralson	F	33°12'27" 84°34'58"	30	180	85	6	8/77	do.	780	—	—
9Z4	(b)(6) Personal Esco Gas Co. Haralson	A	33°13'33" 84°34'13"	50	208	132	6	12/55	do.	820	—	—
9Z5	do.	A	33°13'35" 84°34'23"	74	257	134	6	9/60	do.	820	—	—
9Z6	(b)(6) Personal Dreweyville Rd. Haralson	A	33°13'33" 84°34'07"	48	199	135	6	4/66	do.	820	—	—
9Z7	Haralson School Haralson	A	33°13'38" 84°33'58"	38	203	109	—	—	—	830	20	75
9Z9	(b)(6) Personal Dreweyville Rd. Haralson	A	33°13'19" 84°32'05"	47	400+	—	—	1960's	—	800	—	—
9Z10	(b)(6) Personal Private Haralson	F	33°11'10" 84°16'57"	50	313	187	6	5/61	Virginia	810	—	—
9AA1	Eastside Elem. School Old Highway 85 Senola	C	33°15'58" 84°34'48"	26	326	81	—	10/54	do.	900	20	166
9AA2	East Coweta School Peaks Crossing Sharpsburg	A	33°18'14" 84°35'56"	48	152	—	—	12/50	do.	940	—	125

Table 9.—Record of wells in the Greater Atlanta Region—Continued

Well No.	Owner	Water-bearing unit	Latitude and longitude	Yield (gal/min)	Depth (ft)	Casing		Date drilled	Driller	Elevation (ft)	Water level below land surface	
						depth (ft)	diam. (in.)				Static head (ft)	Pumping head (ft)
Coweta County												
9AA3	(b)(6) Personal McKnight Grain Elev. Senoia	A	33°17'57" 84°33'49"	30	204	—	—	3/74	Virginia	840	—	—
9AA4	City of Senoia Senoia	A	33°17'49" 84°33'39"	55	500	40	—	2/46	Sou.-Stevens	840	—	—
9AA5	do.	A	33°17'30" 84°33'22"	53	459	107	—	4/47	Virginia	820	—	—
9AA6	do.	A	33°18'06" 84°32'57"	50	385	—	—	10/58	Adams-Massey	850	—	—
9AA7	do.	A	33°18'22" 84°33'14"	50	500	—	—	—	—	850	—	—

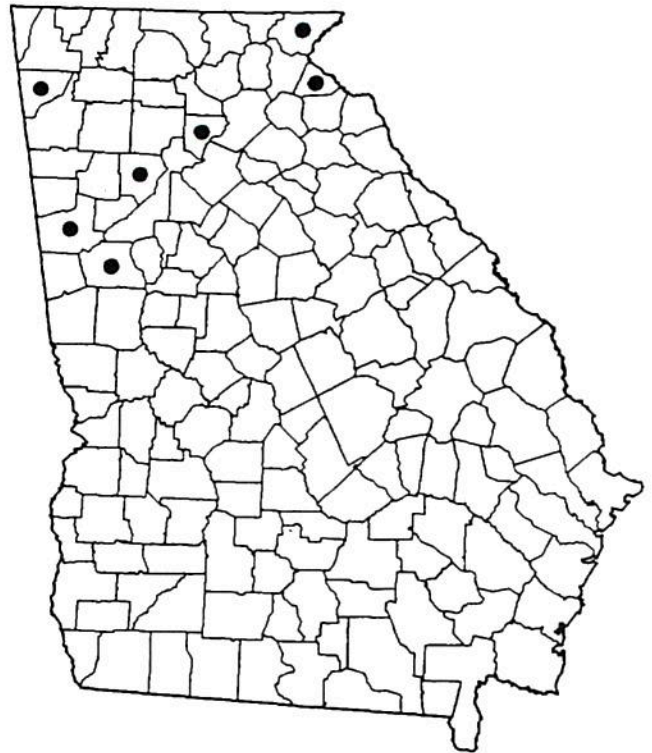
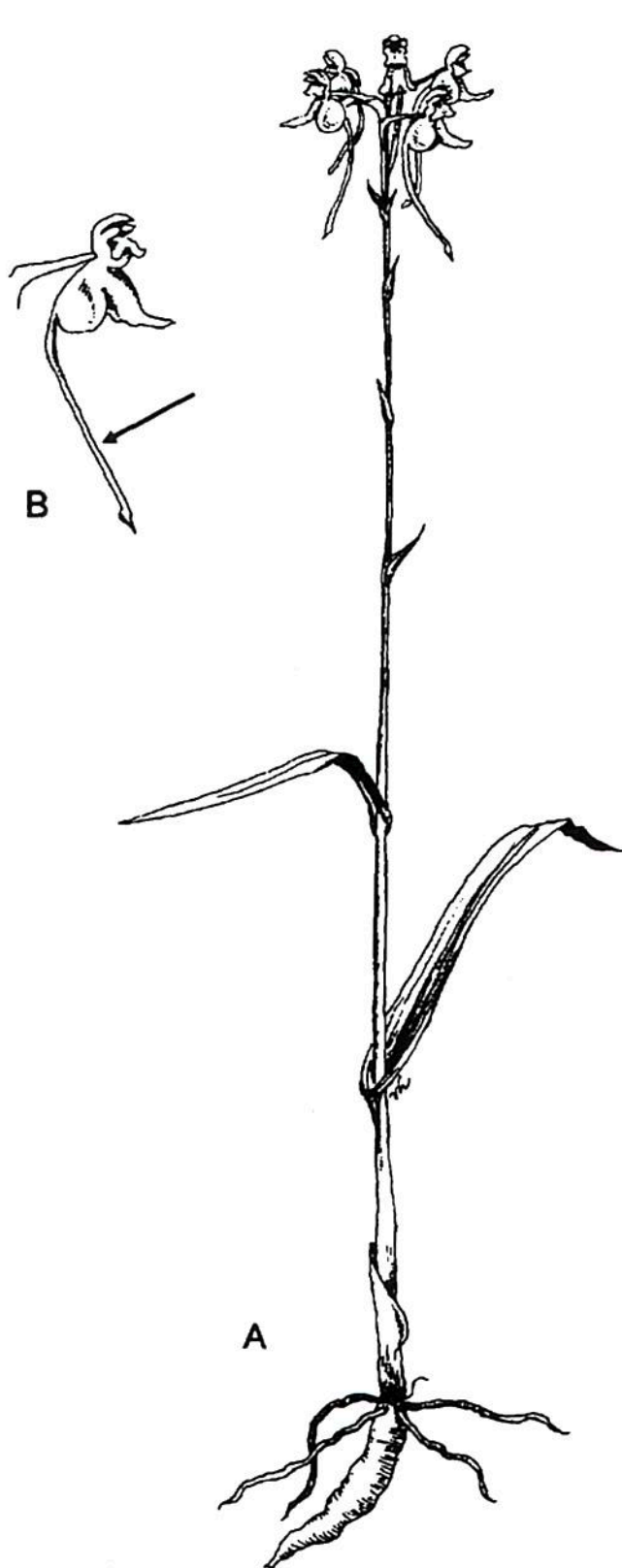
Table 9.—Record of wells in the Greater Atlanta Region—Continued

Well No.	Owner	Water-bearing unit	Latitude and longitude	Yield (gal/min)	Depth (ft)	Casing		Date drilled	Driller	Elevation (ft)	Water level below land surface	
						depth (ft)	diam. (in.)				Static head (ft)	Pumping head (ft)
Dawson County												
11KK2	Cousins Properties, Inc. Big Canoe Resort Marblehill	—	34°28'28" 84°17'39"	22	600	92	6	6/72	Virginia	1,820	158	250
11KK3	do.	—	34°28'18" 84°17'54"	103	335	52	6	7/72	do.	1,700	93	127
11KK9	do.	—	34°28'35" 84°18'39"	23	500	25	6	5/73	do.	1,870	10	315
11KK11	do.	—	34°28'11" 84°17'09"	28	500	71	6	7/73	do.	1,660	80	235
11KK12	do.	—	34°28'20" 84°17'15"	60	500	72	6	7/73	do.	1,640	60	255
11KK13	do.	—	34°28'12" 84°17'40"	40	500	38	6	7/73	do.	1,720	50	265
11KK14	do.	—	34°28'04" 84°17'07"	43	500	64	6	8/73	do.	1,650	—	150
11KK16	do.	—	34°28'22" 84°19'09"	53	500	81	6	8/73	do.	1,840	135	180
11KK24	do.	—	34°28'02" 84°15'23"	43	166	58	6	12/72	do.	1,840	31	116

Appendix H

Monkeyface Orchid, White Fringeless Orchid

Orchid Family, ORCHIDACEAE



LEGAL STATUS:

State: THREATENED
Federal: CANDIDATE

SYNONYMY:

Habenaria blephariglottis (Willdenow) Hooker
var. *integrilabia* Correll
Habenaria correllii Cronquist

RANGE: Cumberland Plateau of northwestern Georgia and adjacent Alabama, north through Tennessee to southern Kentucky; Gulf Coastal Plain of central Mississippi and Alabama; also extremely scarce to extirpated in the Blue Ridge Mountains and foothills of the Piedmont Plateau in Georgia and the Carolinas, north to southwestern Virginia. Recorded from seven counties in Georgia (see map).

ILLUSTRATION: (A) plant habit, with both fibrous and tuberous roots and few-flowered inflorescence, 0.6×; (B) flower, side view, 1.2×; note long spur. Source: original drawing by Vicky Holifield.

DESCRIPTION: Perennial herb to 6 dm tall, from a cluster of fibrous roots and 1–few, tuberous,

fleshy roots (see illustration). The stem leaves number two or three, and are lanceolate, slightly folded along a strong central vein, up to 20 cm long and 3 cm wide, becoming bract-like near the top of the stem. Juvenile plants may have no aboveground stems and appear as single, strap-shaped leaves. The inflorescence is a loosely flowered, terminal cluster (raceme) with 6–15 pure white flowers. The flowers are white and bilaterally symmetrical, modified in a complex way for insect pollination. For our purposes, a lower lip (landing platform from an insect's vantage point) and a prominent spur (source of nectar for the insect) need to be distinguished. The lip is 13 mm long and 3–5 mm wide, with an entire to slightly and irregularly fringed margin. The downward-pointing spur is 4–5 cm long (see illustration). The fruit is an ellipsoid capsule, 15 mm long, 3 mm wide, with numerous, dustlike seeds. **Flowering period:** mid-July to late August; **fruiting period:** September to October. **Best search time:** during flowering, since a few other orchids in the same genus have similar leaves, making the flower essential for identification.

HABITAT: Found in red maple-blackgum swamps; along sandy, damp stream margins; or on seepy, rocky, thinly vegetated slopes. Common associates include green woodland orchid (*Platanthera clavellata*), white violet (*Viola primulifolia*), cowbane (*Oxypolis rigidior*), and grass-of-Parnassus (*Parnassia asarifolia*). In one bouldery gorge site, poison sumac (*Toxicodendron vernix*) grows overhead above seepy mounds of sphagnum moss and scattered grass-pinks (*Calopogon tuberosus*). The typical habitat is a seasonally wet, perched, sandy, springhead swamp dominated by red maple (*Acer rubrum*) and blackgum or swamp tupelo (*Nyssa biflora*).

SPECIAL IDENTIFICATION FEATURES: The only definitive way to identify the white fringeless orchid is to observe the flower. The long spur, the entire (or nearly so) margin of the lip, and the pure white color distinguish this orchid from any other native species. Typically, this orchid resides in deep shade and vegetative specimens with only strap-shaped basal leaves far outnumber flowering individuals.

MANAGEMENT RECOMMENDATIONS: Avoid drainage of site. Hand thinning of shading trees in its vicinity, if done carefully, may be beneficial to this species. Of horticultural interest: protect from removal by irresponsible persons.

REMARKS: The earliest collection of this species came from somewhere in Georgia, in 1840. The earliest mention in botanical literature dates to 1910. In 1941 Donovan S. Correll (1908–1983) formally described it as *Habenaria blephariglottis* var. *integrilabia*, distinguished from typical *H. blephariglottis* by its entire lip. Some authors, such as Correll, employ a broad concept of *Habenaria*, one that includes a group of species others recognize as a distinct genus, *Platanthera*. In 1975 Carlyle A. Luer elevated it to the rank of species, calling it *Platanthera integrilabia*. For those who prefer to consider this plant a *Habenaria*, using the combination *H. integrilabia* could lead to confusion with another species, for which the name *Habenaria integrilabris* was published in 1909. The International Code of Botanical Nomenclature, the "law" governing the scientific names given to plants, forbids such confusing names. This is the rationale for the recently published name, *Habenaria correllii*. *Platanthera integrilabia* is rare throughout its range. It has sustained significant habitat loss due to draining and clearing of its habitat for conversion to agricultural land, and is considered vulnerable to commercial or other over-collecting.

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GEORGIA'S PROTECTED WILDLIFE COUNTY CROSS-REFERENCE

RECEIVED

NOV 24 1992

Environmental Protection Div.
Hazardous Waste Mgmt. Branch

Federal

SHORTNOSE STURGEON E
SPOTFIN CHUB T
YELLOWFIN MADTOM T
SOUTHERN CAVEFISH
AMBER DARTER E
CONASAUGA LOGPERCH E
SNAIL DARTER T
GEORGIA BLIND SALAMANDER
ATLANTIC GREEN TURTLE T
ATLANTIC HAWKSBILL
LOGGERHEAD T
ATLANTIC RIDLEY E
LEATHERBACK E
AMERICAN ALLIGATOR T
EASTERN INDIGO SNAKE T
EASTERN BROWN PELICAN
WOOD STORK E
SOUTHERN BALD EAGLE E
PEREGRINE FALCON E
PIPING PLOVER T
RED-COCKADED WOODPECKER E
IVORY-BILLED WOODPECKER E
BACHMAN'S WARBLER
KIRTLAND'S WARBLER E
GRAY BAT E
INDIANA BAT E
SHERMAN'S POCKET GOPHER -
COUGAR E
SEI WHALE E
FIN WHALE E
HUMPBACK WHALE E
BLACK RIGHT WHALE E
SPERM WHALE E
WEST INDIAN MANATEE E

Appling
Atkinson
Bacon
Baker
Baldwin
Banks
Barrow
Bartow
Ben Hill
Berrien
Bibb
Bleckley
Brantley
Brooks
Bryan
Bulloch
Burke
Butts
Calhoun
Camden
Candler
Carroll
Catoosa
Charlton
Chatham
Chattahoochee
Chattooga
Cherokee
Clarke
Clay
Clayton
Clinch
Cobb
Coffee
Colquitt
Columbia
Cook
→ Coweta
Crawford
Crisp

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X=General occurrence, see appendix; O=Occurs in offshore waters only;
W=Winter occurrence only; S=Summer occurrence only; M=Occurs irregularly
as a migrant; R=Release or potential release site; H=Historical occurrence

